ORISSA REVIEW

REPUBLIC DAY SPECIAL

GOVT. OF ORISSA I. & P.R. DEPT.
No. 7705
Dt.
Bhubaneswar
1/12/94
REFERENCE LIBRARY

A group of young artistes from Kalahandi presented Dandanrutya at Mahajati Sadan, Calcutta. The troupe was invited by West Bengal Government in connection with the celebration of IYC.

Governor
Shri B. D. Sharma's
Republic Day Message

We are celebrating the 31st Republic Day of our Nation. I offer my warmest greetings and good wishes.

Orissa has an abundance of natural resources. It has a glorious tradition of excellence in handicrafts, sculpture and architecture. Let us all preserve these and enrich our lives.

It is only through discipline and hard work that we can successfully meet the challenge of the day. Prosperity for any Nation has never come the easy way. You look around and can see that it is only hard work, and discipline that has brought much progress in modern countries.

My appeal today to all of you is that you should rise above all petty considerations and work unitedly with determination to achieve the task that lies ahead to make Orissa a progressive State of our country.

The need of the day is to build a great country whose progress and safety should be above all other considerations.

JAI HIND

The nation today celebrates its thirty-first Republic Day. The people of India are once again reminded of the tasks that lie ahead for them to strengthen the cause of democracy and to fight the forces that threaten their freedom and progress.

Over the years, our people have amply demonstrated their determination and zeal to defend their democratic rights at any cost. In course of this historic process we have learned many a lesson. The most significant of these relates to the need to develop a greater sense of responsibility in order to deal with the challenges inherent in our democracy. Until this sense pervades our national life we would still be groping in the dark disillusioned in our quest of the cherished goal. Let us all remember on the historic occasion that democracy is not an end in itself but only a means to achieve the ideals our nation stands for.

I send my warmest greetings to the people of Orissa on the occasion of the Republic Day, 1980, and I wish them peace, prosperity and progress in the years to come.

Nilamoni Routray

Chief Minister, Orissa

ORISSA REVIEW

JANUARY 1980
Magha
Vol. XXXVI, Nos. 4, 5 & 6

Editor-in-Chief
A. K. MISHRA
Director of Information & Public Relations

Editor
B. B. PATNAIK

Assistant Editor
PRAHARAJ S. N. NANDA

Associate Editor
S. K. PATNAIK

Cover Design
ASIT MUKHERJEE

* * *

Publisher
Information & Public Relations Department
Government of Orissa
Bhubaneswar

Printer
Orissa Government Press
Madhupatna, Cuttack

Subscription : Annual—Rs. 6·00, per copy : Re. 0·50

* * *

ORISSA REVIEW seeks to provide a condensed record of the activities and official announcements of the Government of Orissa and other useful information. Many items appear in summarised form. Such items should not be treated as complete and authoritative versions.

Although published on behalf of the Government of Orissa, Information & Public Relations Department, the views in the items expressed in the 'Orissa Review' are not necessarily those of the Government of Orissa.

IN THIS ISSUE

God is .. 1
A Challenge .. 3
OSFC activities in brief .. 7
Two devotional poets of ancient Oriya literature. 11
More care after the harvest of rice .. 15
Some aspects of eucalyptus planting .. 18
The Nucleus of Industrial Activities in Orissa. 21
On rationality and men .. 24
Unification as a theme of scientific imagination and the advancement in high energy physics. 27
Educating children .. 31
Random Rambling (2) .. 35
Police and the young offenders .. 37
Female infanticide in Southern Orissa .. 40
Pandit Gopabandhu Das and his educational concept. 43
Village Belabani—an eye-opener .. 47
Central Inland Fisheries Research Station, Cuttack. 49
Environmental population in our time : Its magnitude, dimensions and effects. 52

"In the last few days, lakhs and lakhs of joyous people, from all walks of life and all parts of the country, have been pouring in to greet me. Now, upon assuming office, my first act is to express my deep gratitude for the mandate which you have given me with such trust and affection. I do this in all humility and in no partisan spirit. Our hand-off friendship has been grasped by the people with overwhelming warmth and eagerness. This warmth and close involvement we intend to extend and deepen in our march towards the building of the new India of our vision....."

SHRI JANAKI BALLAV PATNAIK

Minister, Tourism and Civil Aviation

The President Shri Neelam Sanjiva Reddy, administered the oath of Office and Secrecy to Smt. Indira Gandhi as Prime Minister and her Cabinet Colleagues at Rashtrapati Bhavan on January 14, 1980. The new Ministry comprises 15 Cabinet Ministers and 7 Ministers of State. Shri Janaki Ballav Patnaik of Orissa was sworn in as a Cabinet Minister. He has been assigned the Portfolio of Tourism, Civil aviation.

Orissa on the threshold of 31st year of the Republic

The past year has been a period of stresses and strains for the people of Orissa on account of the erratic behaviour of monsoon which culminated in a severe drought. This has damaged the Kharif crop extensively. For the want of winter rain, the prospects of Rabi crop have also dwindled. Out of the total of 3,830 Grama Panchayats in the State, 2,319 Grama Panchayats so far have been declared as drought affected. In the wake of the continuing drought situation, extensive test relief work, Food-for-Work Programme and other labour intensive projects were taken up in right earnest with a view to ensuring employment to the people in the affected areas.

FOOD FOR WORK

Scope of Food-for-Work Programme was sufficiently extended and through Grama Panchayats and voluntary agencies, sufficient grains were supplied to take up many useful projects like construction of roads and bridges, digging of drinking water wells, renovation of tanks, buildings for Schools, Mahila Samitis and Yubak Sanghas, etc. Under the Food-for-Work Programme, 98,000 M. Tonnes of foodgrains have been distributed to the districts, besides another 61,000 M. Tonnes of common rice have also been received under special Food-for-Work Programme. Our State has the distinction of coming out 2nd in the country in the implementation of this programme.

TEST RELIEF

A sum of Rs. 261·50 lakhs has been allotted to all the districts for taking up Test relief and cross-bund works. Under these programmes, 11,044 projects have been taken up.

FEEDING PROGRAMME

Mid-day meal programme has been extended to include 5,00,000 more beneficiaries in addition to 2 lakh beneficiaries under normal programmes. 10·54 lakh children, expectant and lactating mothers in the drought affected areas have been covered. Gratuitous relief is being provided through G. R. Cards to 58,598 old, infirm and disabled persons in the affected areas. By December end, employment for 266·12 lakhs man-days has been created through various labour intensive projects for the rural labourers.

LABOUR INTENSIVE WORKS

The Government have also declared since July, 1979 in categorical terms that labour intensive works providing employment to 500 labourers in a day in every panchayat would be taken up in all the affected areas. All the executive agencies of the Government have been issued with firm instructions to concentrate and expedite execution of labour intensive works in the affected areas. Besides stabilizing the prices of foodgrains, the Food-for-Work Programme has helped in a big way to arrest the inflationary pressure.

Rs. 2·50 crores has been allotted through the Community Development Department for taking up minor irrigation projects, laying of Panchayat Samiti Roads, sinking of dug wells for providing drinking water facilities. 2,725 wells including tube-wells have been constructed. An impressive dug-well programme of installing 4,558 dug-wells in the drought affected areas has already been taken up and 2,164 tube-wells have been completed so far. 3,519 sanitary wells have been constructed by the Community Development Department and the programme for 1980-81 also provides for construction of similar number of wells at a cost of Rs. 1·78 crores. In addition, this year, Rs. 10 crores more has been spent out of the **T. & R. W.** Budget.

NEW IRRIGATION PROJECTS

The only lasting solution to the problems of drought would be to extend the irrigation facilities so that the flow water resources during the rainy season are properly conserved and the ground water potential is adequately tapped. Seven new major and medium irrigation projects like Upper Indrabati Project, Samal Barrage, Harbhangi, Kanjhari, Hariharjor, Upper Suktel, Baghua Stage-II have been taken up. Besides, schemes for 2 medium irrigation projects viz., Tiroli, which will benefit extensive areas of Balangir and Sambalpur districts and Indrabandha which will benefit parts of Kalahandi and Balangir districts and four medium irrigation projects in the the districts of Mayurbhanj, Keonjhar, Kalahandi specially in the drought prone areas are now on the anvil. All these projects when completed will provide irrigation over 3·60 lakhs hectares. This apart, a massive Lift Irrigation Programme includiug 1·5 lakhs tube-wells has been prepared for implementation by June, 1980 out of which 15,000 wells will be energized.

AGRICULTURE AND SOCIAL FORESTRY

The scope of Rabi Crop was extended to cover 2,500,000 hectares. A number of concessions such as conversion of the short-term loans into medium-term loans, sanction of fresh loans to the ineligible farmers have been declared for the drought affected areas.

Establishment of the State Seeds Corporation will go a long way in meeting the requirement of the farmers in quality seeds. Similarly, for extension of the scope of cashew plantation in the coastal belts and other barren areas of the State, a Cashew Development Corporation has been set up. In tribal areas, large scale *IN SITU* plantations of fruit bearing trees, over 138,000 hectares have been taken up. This would provide the necessary green cover to the barren hill slopes as well as a source of income to the tribal families who will have usufructuary rights over the trees planted on the lands allotted to them.

In order to combat the menace of denudation of natural forest and depletion of fuel and timber wood an ambitious Social Forestry Scheme has been implemented under which fast growing species of timber value and fruit-bearing trees are being planted. This will create "MIXED PLANTATION" of fuel, fodder, fruit and timber species on the barren and fallow lands around a village. During 1977-78 and 1978-79, about 600 hectares and 4547 hectares respectively were planted in Orissa under this scheme and during 1979-80 an area of 5,472 hectares has already heen brought under. A total of 9·34 lakhs seedlings have been distributed among the farmers.

The coastal belts of Cuttack, Puri and Balasore and Ganjam are prone to frequent visitations of cyclones. With a view to protecting this belt from the fury of cyclones and tidal bores, protective shelter belt along 1 Km. belt of the seashore is being raised with Casuarina. By the end of 1977-78, an area of 3,847 hectares has been covered, another 3,500 hectares was brought under during 1978-79 along a stretch of 35 Kms. of the coastal line. During 1979-80 another 4,680 hectares have been covered. Raising of Avenue Plantation along the road side is another important feature. Under Avenue Plantations alone, a stretch of 953 Kms. have already been raised.

CO-OPERATION

For a rapid development in the Agricultural sector, the co-operatives have a significant role to play. Efforts made to increase the number of beneficiaries and to provide the package of services like supply of agricultural inputs, provision of the credit requirements; marketing of agricultural products by ensuring the support price and distribution of essential commodities to meet the basic needs of the poor through large sized multipurpose Co-operative societies in the tribal areas and Farmers' Co-operative Societies in other areas are praiseworthy. 228 LAMPS and F. C. S. have been organised. In the tribal areas, the T. D. C. C. is being strengthen to act as an apex agency of the LAMPS operating in the field. The rate of interest of short-term agricultural credit was reduced from 14·5 per cent to 11 per cent and the provisions of the Co-operative Act were suitably amended to facilitate expeditious sanction of loans. With the participation of the World Bank, an impressive programme in creation of storage capacity of 2·14 lakhs of tonnes in the rural areas have been finalised.

CONSOLIDATION OF LAND HOLDINGS

One of the serious limitations of our agricultural programme has been the fragmented nature of land holdings. The consolidation programme which is becoming increasingly popular has been extended to cover 8,16 478 hectares in 4,866 villages. By now, the consolidation operations for 40,382 hectares has been completed in 555 villages. With better understading of the advantages of the scheme among the beneficiaries, it is hoped that this will make spectacular progress in the near future.

LAND TO LANDLESS

Over 57,755 acres of cultivated land has been provided to 44,199 landless persons including 20,297 tribals and 7,255 Harijans. More than 3,678 acres of homestead land has been allotted to 72,209 beneficiaries of whom 23,871 belong to Scheduled Tribes and 19,702 to Scheduled Castes. Under the Integrated Rural Housing Scheme, 11,668 houses have been constructed. 11,213 homeless families belonging to Scheduled Castes and Scheduled Tribes have been allotted one house each.

TRIBAL DEVELOPMENT

In the Tribal sub-plan areas, special programme for the economic upliftment of the tribals through improvement of Agriculture, Horticulture, Dairy, Establishment of Village and Cottage Industries are being undertaken by the Integrated Tribal Development Agencies, specially set up for the purpose. For the tribals living outside the sub-plan areas, a new scheme called Modified Area Development Programme (MADP,) has been launched. In order to bring the peculiar problems of the primitive tribes into a sharper focus, Micro Projects bave been started for the Tribes of Bondas, Koyas, Gondas, Kutiyas, Paudi Bhyuans and Sauras. A Scheduled Castes Financing Corporation has been established with the object of providing margin money to the

Harijans so that they can avail themselves of the facilities of institutional finance, for taking up economically viable projects. In the fist phase 153 blocks having more than 15 per cent of Harijan population have been selected.

RURAL UNEMPLOYMENT

To effectively tackle the stupendous problem of unemployment in the rural areas, emphsis has been laid on two important programmes, viz.,-Antyodaya meant for the poorest landless families, and Integrated Rural Development Programme for the small and marginal farmers and rural artisans. Last year 11,000 villages covering 61,000 families have been selected under Antyodoya Programme and a sum of Rs. 30 lakhs has been disbursed by way of loan to 6,800 families.

POWER PROJECTS

With the commissioning of Upper Kolab Rengali Hydro-Electric Projects and extension of Talcher Thermal Power Station, it is expected that the installed capacity for power generation in the State will go up from 9·14 M. Watt. to 14·07 M. Watt. which wiil surely act as a catalyst for rapid industrialisation of the State.

INDUSTRIES

During the last two years, spectacular breakthrough has been achieved in the industrialization of Orissa. Besides the major projects in the Central and Private Sectors, 14 major and medium industries have been grounded with active collaboration of State Sector agencies like I. D. C., IPICOL and Orissa Mining Corporation.

These industries when completed in 1983, will provide direct employment to 43,000 people. Of these 14 industrial projects, 6 are being implemented in the joint sector with the participaticn of IPICOL. Two in the public sector and one with the participation of I. D. C. are also being taken up. In addition, the I. D. C. is going to set up 5 industrial projects of its own.

The Rs. 1·60 crore Utkal Asbestos Project established at Dhenkanal by M/s. Utkal Asbestos Ltd. will go into production next month. Construction of the 25 crore Sponge Iron Project of Keonjhar in the Central Sector will be completed by the end of March, 1981 and production will start in March, 1982. The Rs. 9 crore Refractories Project which is going to be set up with the joint venture of IPICOL and the Belpahar Refractories will go into prodcution in 1982. The products of this factory will be exported to foreign countries. Besides, the 11·50 crore S. N. Fasteners Project at Dhenkanal, Rs. 5 crore Calcium Carbide Project at Bileipada in Keonjhar and the Konark Wood Panels at Rayagada in Koraput district costing Rs. 2 crores will go into production in course of two to three years.

The I. D. C. alone is going to invest Rs. 34·34 crores in six projects, viz., Rs. 7 crores on the expansion of Hira Cements, Rs. 6 crores for the new Spinning Mill at Sonepur, Rs. 5 crores in Mini Cement Factory at Sundargarh, Rs. 5·29 crores in Spun Pipe Factory at Barbil, Rs. 1·5 crores in the Properzi Mill of the Hira Cable Works and Rs. 10 cores in X· L. P. E. Cable Project at Baripada.

Besides earning profits, the Orissa Mining Corporation has made all necessary arrangements for installation of a Charge Chrome Project at an estimated cost of Rs. 17 crores at Jajpur and a Ferro-Vanadium Project at an estimated cost of Rs. 25 crores at Rairangpur.

In the Central Sector, six major industrial projects, viz., 186 crore Fertilizer Project at Talcher,Rs. 50 crore Heavy Water Project at Talcher, Rs. 85 crore Industrial Rare Earths

Project at Chatrapur, Formed Coke Plant at Talcher and Wagon Repair Workshop at Bhubaneswar are now in different stages of execution. For location of the Shipyard and Fertilizer Plant at Paradeep and 2nd Steel Plant consistent efforts have been made.

The continued efforts of this Government in establishment of an Aluminium Complex at Koraput has at last succeeded. France will assist in setting up this 1,000 Crore Aluminium Complex in Orissa which will produce 8 million tonnes of Alumina annually and will have a smelter plant capable of producing 218,000 tonnes of Aluminium.

ADULT LITERACY

3,330 Adult Literacy Centras were started in the State during 1978-79 and 100,000 illiterate persons were educated. During the current year, 18,700 literacy centres with 260,000 adults have been opened in the State.

ANIMAL HUSBANDRY

Under Animal Husbandry, significant strides have been made in Cross-breeding Programme. In the districts of Cuttack, Puri, Dhenkanal and Sambalpur loan and subsidy of Rs. 1,600 have been sanctioned to 9,000 small and marginal farmers and agricultural labourers. Out of this, for small and marginal farmers the subsidy is 50 per cent of this amount. But in case of the agricultural labourers, the subsidy assistance is Rs. 1,033. A Frozen Semen Bank has been established at Khapuria in Cuttack.

Under this programme, in order to increase the number of Hybreed calves like Jeresy, Holstein, the State Government have opened 51 Frozen Semen Centres in Cuttack and Puri districts. Four more such centres have been opened in Phulbani and Kalahandi districts by the Indian Agro Industries Corporation. In the Poultry Programme, 150,000 poultry birds have been distributed among 3,500 small and marginal farmers.

TOURISM

The Tourist Development Corporation with a capital of Rs. 2 crores has been set up to provide the infrastructure by way of comfortable accommodation and transport facilities in order to cope with the increase in the tourist traffic. I. T. D. C. is also planning to set up a number of modern hotels at places like Puri, Konark, Bhubaneswar and Similipal.

* * *

FOOD FOR WORK PROGRAMME MAKES HEADWAY

The total requirement of foodgrains stock for 1979-80 was kept at 1,20,000 M. Tonnes which involves additional outlay of Rs. 14,40 lakhs. However, Planning & Co-ordination Department have released 1,25,200 M. Tonnes of foodgrains in favour of Community Development and Social Welfare Department up to January, 1980 to tackle the drought situation. The requirement of foodgrains for the next year (1980-81) has been projected to be 1,20,000 M. Tonnes which involves additional outlay of Rs. 16,80 lakhs. Works supervision committees at the Block and Grama Panchayat levels have been constituted with the local M. L. As. and non-officials to ensure proper utilisation of the grains. During the year 1977-78, 17,407 M. Tonnes of foodgrains have been utilised and 51,36,000 mandays have been generated and 5,446 Kms. of rural roads have been improved.

During the year 1978-79, 91,292 M. Tonnes of foodgrains have been utilised with which 36,127 Kms. of rural roads, 2,750 Nos. of M. I. Ps., 736 Nos. of drinking water wells, 7 Nos. of G. P. Ghars and 2,587 Nos. of school buildings have been maintained and 2,51,17,000 mandays generated.

During the current financial year (1979-80) 76,214 M. Tonnes of foodgrains have been utilised up to end of December 1979 with which 4,045 Kms. of roads, 1,202 Nos. of M. I. Ps.. 564 Nos. of drinking water wells, 14 Nos. of G. P. Ghars and 1,348 Nos. of school buildings have been maintained and 79,05,000 mandays generated up to the end of September, 1979.

GOD IS

—MAHATMA GANDHI

There is an indefinable mysterious Power that pervades everything. I feel it, though I do not see it. It is this unseen Power which makes itself felt and yet defies all proof, because it is so unlike all that I perceive through my senses. It transcends the senses.

But it is possible to reason out the existence of God to a limited extent. Even in ordinary affairs we know that people do not know who rules or why, and he rules. And yet they know that there is a power that certainly rules. In my tour last year in Mysore I met many poor villagers and I found upon inquiry that they did not know who ruled Mysore. They simply said some god ruled it. If the knowledge of these poor people was so limited about their ruler, I who am infinitely lesser than God, then they than their ruler, need not be surprised if I do not realize the presence of God, the King of Kings. I do feel as the poor villagers felt about Mysore that there is orderliness in the Universe, there is an unalterable Law governing everything and every being that exists or lives. It is not a blind law ; for no blind law can govern the conduct of living beings, and thanks to the marvellous researches of Sir J. C. Bose ; it can now be proved that even matter is life. That Law then which governs all life is God. Law and the Law-giver are one. I may not deny the Law or the Law-giver, because I know so little about it or Him. Even as my denial or ignorance of the existence of an earthly power will avail me nothing, so will not my denial of God and His Law liberate me from its operation; whereas humble and mute acceptance of divine authority makes life's journey easier even as the acceptance of earthly rule makes life under it easier.

I do dimly perceive that whilst everything around me is ever changing, ever dying, there is underlying all that change a living power that is changeless, that holds all together, that creates, dissolves and re-creates. That informing power of spirit is God. And since nothing else I see merely through the senses can or will persist, He alone is.

And is this power benevolent or malevolent ? I see it is purely benevolent. For I can see that in the midst of death life persists, in the midst of untruth, truth persists, in the midst of darkness light persists. Hence I gather that God is Life, Truth, Light. He is Love, He is the Supreme Good.

But He is no God who merely satisfied the Intellect, if He ever does. God to be

God must rule the heart and transform it. He must express Himself in every smallest act of His votary. This can only be done through a definite realization more real than the five senses can ever produce. Sense perceptions can be, often are, false and deceptive, however real they may appear to us. Where there is realization outside the senses it is infallible. It is proved not by extraneous evidence but in the transformed conduct and character of those who have felt the real presence of God within.

Such testimony is to be found in the experiences of an unbroken line of prophets and sages in all countries and claims. To reject this evidence is to deny oneself.

This realization is preceded by an immovable faith. He who in his own person tests the fact of God's presence can do so by a living faith. And since faith itself cannot be proved by extraneous evidence, the safest coure is to believe in the moral government of the world and therefore in the supremacy of the moral law, the law of Truth and Love. Exercise of faith will be the safest where there is a clear determination summarily to reject all that is contrary to Truth and Love.

I cannot account for the existence of evil by any rational method. To want to do so is to be co-equal with God. I am therefore humble enough to recognise evil as such. And I call God long-suffering and patient precisely because he permits evil in the world. I know that He has no evil. He is the author of it and yet untouched by it.

I know too that I shall never know God if I do not wrestle with and against evil even at the cost of life itself. I am fortified in the belief by my own humble and limited experience. The purer I try to become, the nearer I feel to be to God. How much more should I be, when my faith is not a mere apology as it is today but has become as immovable as the Himalayas and as white and bright as the snows of their peaks ?

"When you find a person worthy to talk to and fail to talk to him, you have missed your man. When you find a man unworthy to talk to and you talk to him, you have wasted your words. A wise man neither misses his man nor misses his words."

"If your circumstances are trying, it is because you need them, and can evolve the strength to meet them. They are trying because there is some weak spot within you, and they will continue to be trying until that spot is eradicated. Be glad that you have the opportunity of becoming stronger and wiser. No circumstances can weary love. Stop brooding over your own trying circumstances and contemplate the lives of some of those about you." (James Allen).

"He who seeks pleasure devoid of gain or virtue is akin to him who sleeps at the top of a tree and wakes up only when he falls below." (Ramayana).

A CHALLENGE

DR. G. C. SENGUPTA

Initially the projection made for Kharif coverage during 1979-80 was 61·00 lakh hectares assuming that there would be normal weather. The rainfall until the month of September was 40 per cent deficient than that of the corresponding period of last three years. With hardly 14 per cent of farm land under irrigation crop loss in the State, at the most conservative estimate, will be of Rs. 230 crores. More than one crore of the total 2·6 crores of population will be affected. With late and weak monsoon the crop coverage has come down to 54 lakh hectares out of which only 8 lakh hectares received stable irrigation. The rest of the sown area (46 lakh hectares) suffered crop loss in varying degrees from 90 per cent in high lands to about 30 per cent in low lying paddy which is the principal crop. The damage to other crops is estimated to be 50 per cent on the average.

A special Rabi programme has, therefore, been drawn up to cover 41·29 lakh hectares instead of 34 lakh hectares originally targeted. This is, certainly a challange, a challange that needs to be met by the agricultural scientists, extension workers and the farmers of the State. The resources that are to be harnessed to make Rabi programme a success may be limited, but not inadequate. We are to exploit and utilise them in full. The strategies have, therefore, been recast and emphasis has been given to grow medium and light duty crop instead of heavy duty ones to utilise the available water under irrigated condition and the residual moisture in non-irrigated belts for covering larger areas to the extent possible.

The normal Rabi programme was drawn up for 34 lakh hectares and eventually it has been recast to 41·29 lakh hectares. The categorywise proposed Rabi coverage is as follows :—

		Hectares
1. Summer Rice	..	180,000
2. Wheat	..	100,000
3. Other cereals	..	60,000
4. Pulses	..	2,365,000
5. Oilseeds	..	1,012,000
6. Other crops	..	412,000
Total	..	4,129,000

The State Government *vis-a-vis* the Department have arranged to supply quality seeds of wheat, paddy, pulses and oilseeds, etc. to the extent of 92,000 quintals and different types of fertilisers such as N-37,000 metric tonnes, P205-17,560 metric tonnes and K20-9,025 metric tonnes. In order to ensure protection of crops from loss due to pests and diseases adequate supply of different pesticides is being channalised through co-operative and private agencies including supply of P. P. equipments on subsidy.

Water, the most valuable input

In Rabi, water plays the major role, may it be the residual soil moisture or the same tapped, from surface as well as the ground water reserves. The drought, this year, has limited the scope of residual moisture. Therefore, in non-irrigated areas, light duty and short duration pulses and oilseeds have been recommended. The pulses, particularly, have deep penetrating root system and are able to utilise the limited available moisture very efficiently, likewise, mustard, til, sunflower and niger are also well adapted to moisture stress.

While the selection of crop and the variety play quite important role for utilisation of soil moisture, sowing time and the method should not be overlooked. Because, it is important to take up sowing immediately after harvest of the Kharif crop so that moisture need not be lost through evaporation. Piara crops of pulses are recommended in standing fields of paddy where adequate moisture is available after harvest of the late paddy. In other areas with residual moisture, sowing of pulses should be little deeper than the normal and that too, in time, Gram, F. Pea, etc. may be soaked overnight before sowing to ensure better and uniform germination, particularly then it is felt that the soil moisture may not be adequate for the purpose. The seed rate, in non-irrigated areas, may be adjusted according to the available soil moisture. Because in soils with less residual moisture, the seed rate is to be increased more than the recommended, as all the seed sown may not germinate for moisture stress and thereby reduce the plant population.

Treatment of pulses and leguminous oilseeds with bacterial culture before sowing in non-irrigated condition, needs special mention. Bacterial cultures or, the rhizobium cultures induce early vigour in legumenous crops by fixing atmospheric nitrogen in roat nodules and supplying the same to the plant, which again. need phosphate for their growth and activity which should be supplied through soil application of phospatic fertilisers. This fertiliser is helpful both for the active functioning of the bacteria and increasing the productivity of pulses and other legumes including oilseeds.

Minor irrigation projects, lift irrigation points, tube-wells, dug wells, ponds and cross bonds have limited ayacut. It is therefore essential that heavy duty crops particularly deluapaddy in such ayacuts should be firmly discourged. Medium duty crops like ragi, wheat, potato and light duty crops like pulses and oilseeds should only be recommended. However, the suggested pattern should be based on the need of the farmers of the locality. It would be better to take up crops of same kind and duration in compact patches for equilable distribution of limited water. For example, wheat, maize, groundnut, mung, mustard, etc, should not be taken up in one patch. Because, the water requirement and the frequency of irrigation is not the same in case of all these crops. Thus when wheat or, maize failed in irrigated area through flooding, mung and mustard may suffer due to water logging. This of course, needs co-operation between farmers and timely guidance by the extension personnel.

Besides, the surface reserves in rivers and perennial streams for lift irrigation points. the State has a vast potential for dug-wells and tube-wells. The present ground water reserve can support 5·50 lakh standard dug wells fitted with pumpsets or 22 lakh small wells fitted with indigenous water lifting devices both manual and mechanical. As against this vast untapped reserve, our achievement up to June last, is 2·81 lakh wells or, say 15 per cent. A target of 1,50,300 dug-wells have been fixed, in addition to 3,000 filter point tube-wells for the year 1979-80. Interested farmers should go in for dug-wells and tube wells by availing themselves of institutional finance. Government subsidy as well as special subsidy from S.F.D.A., I.R.D., I.T.D.P., and C. A. D. A. (in favour of certain categories of farmers) is provided. Thus, the cultivators, mostly in the non-irrigated areas, should spare no time and efforts to go in for these programme. The extension staff of the Department of Agriculture, Co-operation and Financing Institutions, have combined their hands in assisting the farmers for this purpose.

The yield of the crop does not necessarily depend upon a good quantity of the water provided. Rather a small quantity of water provided in critical periods proves very much beneficial. The experiments in I. A. R. I. show that one irrigation during pod development period of "Parvat" var. of Arhar almost doubled the yield while two irrigations to Bengal gram, one at sowing and the other at flowering considerably enhanced the yield. This aspect is more prominent in the context of the water stress due to drought which has threatened our Rabi programme as a whole. All crops, including rice. need to be managed with care, as far as water is concerned. Rotational provision of irrigation water in canals. irrigation of the fields through field channels, growing crops of same duration and water requirement in compact patches and conserving excess water through water harvesting structures for recycling the same as life-saving irrigation, would go a long way in solving the problems of water stress in irrigated areas.

In small unit of water sources, micro-level production strategies should be encouraged for better water use. Emphasis, in such pockets, should be given for growing light and medium duty crops, construction of field channels for avoiding field to field irrigation reducing water losses through leakage and seepage and conserving water by providing irrigation only at critical stages.

Crop Nutrition

Pulses and idlseeds have been given priority in the present rabi programme. In most of the areas these crops have been sown as second crop to utilise the residual moisture. It has been indicated earlier. that legumenous crops like pulses and groundnut need more of phosphate than nitrogen. In non-irrigated areas, where the moisture zone is fairly low this season, the fertiliser should be placed below the seed being well protected with a layer of soil and compost mixture.

(2) Well decomposed compost or farm yard manure should be adequately added before sowing, so that moisture rententivity of the soil is improved in addition to supply of micro-nutrients.

(3) In case of crops already sown without any nutrient or, with low basal application of nitrogen or phosphate, may be supplied with another split dose in shape of foliar spray. In this case "Urea" for Nitrogen and "Tripple super phosphate or Diamonium phosphate" for phosphate deficiency should be preferred. The concentration of urea spray may be 2-3 per cent while, that of tripple super phosphate or Diamonium phosphate be of 0·5 per cent. The sprays can be taken up on the standing crops, without any consideration of the level of standing water in the field.

(4) In the area with irrigation facility, soil application should be given priority. There, however, stage of the crop for the application of fertilizer is of greater importance. For example, wheat needs nitrogen at crown root initiation within 18 to 21 days after germination. So is the case with Hyb. maize and jowar. But in case of maize, jower or paddy nitrogen should be applied in split doses, preferably more than two. But for wheat and potato, only two split doses one at sowing and the other within 3 weeks after germination proves beneficial. Phosphate and potasic fertiliser should, however, be placed at sowing.

Weeding before topdressing is very essential. This serves two purposes. It eliminates the competition of the unwanted plants for water and nutrients with the crop. Secondly, the nutrients applied at the time of weeding are better incorporated into the soil thereby ensuring better utilisation and crop production.

The infrastructural assistance

Supply of input to meet the requirement of the farmers at the village level has been intensified. The inputs being supplied mostly through co-operatives, arrangements have been made to extend financial assistance through co-operatives as well as other financing institutions, thereby giving the farmers the scope for investment in Rabi cultivation.

Subsidies for dugwells and agricultural implements, etc. are available. Special agencies like S. F. D. A., I. T. D. P., I. R. D. and C. A. D. A., etc. are extending 25 per cent to 50 per cent subsidy to identified farmers to small, marginal and tribal farmers.

Energisation of tube-wells and filter points and electric and diesel pumps have also been subsidised. It is, therefore, the peoples' partcipation that need to be mobilised through Television programme.

To achieve all these sincere efforts of all agencies involved in agricultural programme such as agricultural extension, credit institutions, irrigation and power are required and at the same time their efforts need to be co-ordinated properly at the district and block level.

Director of Agriculture and Food Production,
Orissa, Bhubaneswar.

NEWLY ELECTED MEMBERS TO LOK SABHA FROM ORISSA

1.	Mayurbhanj (S. T.)	Shri Man Mohan Tudu	Congress (I)
2.	Balasore	Shri Chintamoni Jena	Congress (I)
3.	Bhadrak (S. C.)	Shri Arjun Charan Sethi	Congress (I)
4.	Jajpur	Shri Anadi Charan Das	Congress (I)
5.	Kendrapara	Shri Bijoyananda Patnaik	Janata (S)
6.	Cuttack	Shri Janaki Ballav Patnaik	Congress (I)
7.	Jagatasingpur	Shri Laxman Mallik	Congress (I)
8.	Puri	Shri Brajamohan Mohanty	Congress (I)
9.	Bhubaneswar	Shri Chintamoni Panigrahi	Congress (I)
10.	Berhampur	Shri R. Jagannath Rao	Congress (I)
11.	Aska	Shri Ramachandra Rath	Congress (I)
12.	Koraput (S. T,)	Shri Giridhari Gomango	Congress (I)
13.	Nawarangpur (S. T.)	Shri Khagapati Pradhani	Congress (I)
14.	Kalahandi	Shri Rasbihari Behera	Congress (I)
15.	Phulbani (S. T.)	Shri Mrutyunjaya Nayak	Congress (I)
16.	Bolangir	Shri Nityananda Misra	Congress (I)
17.	Sambalpur	Dr. Krupasindhu Bhoi	Congress (I)
18.	Deogarh	Shri Narayan Sahu	Congress (I)
19.	Dhenkanal	Raja Kamakshya Prasad Singh Deo Mahindra Bahadur	Congress (I)
20	Sundargarh (S. T.)	Shri Khristopher Eka	Congress (I)

OSFC activities in brief

The Orissa State Financial Corporation was set up in 1956, under the State Financial Corporations Act, 1951, in order to provide term loans for setting up of Industries, both small scale and medium scale, in the State of Orissa. Assistance is also granted for renovation/modernisation of existing Industries.

The Corporation gives financial assistance to the Industrial concerns engaged or proposed to be engaged in any of the following activities :

(*i*) The manufacture, preservation of processing of goods;

(*ii*) Mining;

(*iii*) The hotel Industry;

(*iv*) The transport of passengers or goods by road or by water or by air;

(*v*) The generation or distribution of electricity or any other form of power;

(*vi*) The maintenance, repair, testing or servicing of machinery of any description or vehicle or vessels or motor boats or trailers or tractors;

(*vii*) Assembling, repairing or packing of any article with the aid oı machinery or power;

(*viii*) The development of any contiguous area of land as an industrial estate;

(*ix*) Fishing or providing short facilities for fishing, maintenance thereof; or

(x) Providing special or technical knowledge or other services for the promotion of Industrial growth.

Loan and assistance in other forms are provided for construction of factory building, acquisition of plant and machinery and also towards electrification and installation expenses. In deserving cases assistance is made available against technical know-how fees and margin money for working capital. Quantum of assistance is limited to Rs. 15·00 lakhs in case of proprietorship and partnership concerns and to Rs. 30·00 lakhs in case of Companies and Co-operative Societies. Foreign exchange loans under the World Bank line of credit are sanctioned for importing machinery from foreign countries

The corporation normally provides assistance with 25 per cent margin. However, it has introduced several schemes as a result of which loans are granted on liberalised terms to different categories of entreprenurs. The schemes, in brief, are as follows :

Technician entrepreneur Scheme

Under the scheme, assistance is provided with 15 per cent margin as against the normal margin of 25 per cent. The following categories of entrepreneurs are treated as Technician Enterepreneurs.

(a) Engineering Degree, Diploma and Certificate holders.

(b) Persons with financial background like Chartered Accountants, Cost Accountants and those having Master's degree in Business Administration.

(c) Graduates having undergone training under the Entrepreneurship Development Programme conducted by the State Directorate of Industries or by the Orissa Small Industries Corporation or by the Small Industries Service Institute.

(d) Skilled operators, technical factory employees who have adequate experience in the line.

In addition to the concession of reduced margin, these entrepreneurs are eligible to get "Soft Loan" from the Corporation.

Soft Loan Scheme

Soft loans are provided to Technician Entrepreneurs for setting up of small scale industries. The quantum of soft loan is fixed in such a manner as to enable an entrepreneur to get 100 per cent Finance (85 per cent term loan and 15 per cent soft loan) against factory building, plant and machinery and electrification and installation expenses, provided the loan amount does not exceed Rs. 2·50 lakhs. In respect of loans above Rs. 2·50 lakhs, soft loans are provided to meet the shortfall in promoter's equity. Consequently promoter's margin is reduced from 15 per cent to 5 per cent-10 per cent.

Soft loans carry interest at 1 per cent per annum with a moratorium of 5 years in the payment of interest and repayment of instalments.

Scheme for "Self-Employment of Educated unemployed persons"

Financial assistance, up to a maximum of Rs. 2·00 lakhs to a single concern is provided with 10 per cent margin under this scheme. Persons with minimum educational qualification of matriculation or its equivalent are eligible to get assistance under the scheme.

Scheme for "Self-Employment of Medical Graduates".

Under the scheme, loans are provided to unemployed Medical Graduates for purchase of X-Ray, ECG and other medical equipments. Apart from this, loans will also be granted for construction of Doctor's Chamber, operation theatre, waiting room and rest room for patients, provided the total plinth area of the building not exceed 3000 sft.

Composite Loan Scheme

The Corporation has introduced a composite loan scheme under which both term and working capital loans, subject to a maximum of Rs. 25,000 are provided to artisans. The loan is provided with liberalised terms and conditions like longer moratorium period for payment of interest and repayment of principal instalments and longer repayment period. Under this scheme assistance is provided to the extent of 100 per cent without insisting on any additional security or third party guarantee.

Small Loan Scheme

The Corporation has introduced a small loan scheme on a pilot basis in 3 places of the State, such as, Puri, Baripada and Jeypore. Under this scheme, loans are given up to a maximum of Rs. 10,000 on concessional terms carrying an interest of 4 per cent to 5 per cent and repayment period stretching up to 5 years. Assistance is provided with nil margin of security.

Other activities

Besides the above, the Corporation provides concessional finance by way of low rate of interest, longer moratorium period and longer repayment period to units which are proposed to be set up in the backward districts of the State. such as, Balangir, Kalahandi, Keonjhar, Koraput, Mayurbhanj, Dhenkanal, Balasore and Phulbani. The Corporation acts as an agent to the Central Government for disbursement of CENTRAL INVESTMENT SUBSIDY to units located in the above mentioned backward districts except Phulbani and Balasore. Thus, units located in 6 of the backward districts of the State are eligible to get central investment subsidy amounting to 15 per cent of the cost of fixed assets. Similarly, units located in 7 other districts of the State are eligible to get STATE INVESTMENT SUBSIDY amounting to 10 per cent (in case of Phulbani 15 per cent) of the cost of fixed assets which is also released through the O. S. F. C. under agency agreement with the State Government. The Corporation also acts as an agent of the Orissa Small Industries Corporation for operation of the SEED CAPITAL LOAN scheme under which seed loans to the eligible units are sanctioned and disbursed by the branch offices of the Corporation.

How IDBI view O. S. F. C.

While reviewing the comparative operations and achievements of the State Level Financial Institutions in the country, the IDBI have commended the phenomenal growth of the OSFC as may be seen from the following paragraph extracted from Chapter-10 of the Industrial Development Bank of India Annual Report, 1978-79. “10·3 :

Of the 16 S. F. Cs. that registered increase in their business the S. F. C. in Orissa topped the list with its sanctions doubling during the year. The other S. F. Cs that recorded sizeable increases in sanction were the S. F. C. of West Bengal (83 per cent), Andhra Pradesh (48 per cent) and Delhi (41 per cent). The sanctions in respect of two S. F. Cs in Kerala and Himachal Pradesh during the year, however, declined sharply by about one-third each from their preceding year's level. In respect of disbursements of assistance the S. F. Cs that recorded sizeable increase were those in Jammu and Kashmir (84 per cent), Andhra Pradesh (65 per cent), Delhi (61 per cent), Orissa (54 per cent), Rajasthan 53 per cent), and Uttar Pradesh (45 per cent). The decline in disbursals of assistance was noted in the case of S. F. Cs of Assam (34 per cent), Himachal Pradesh (21 per cent) and West Bengal (9 per cent).”

O. S. F. C. is maintaining the tempo of growth during the year 1979-80 as it has already sanctioned more than 1 500 loans for Rs. 12·13 crores disbursing Rs. 6·50 crores by 15th December 1979. It is quite manifest from the above trends that O. S. F. C. will exceed the target of sanction, disbursement and recovery when the operations of the whole year 1979-80 are completed.

OSFC Progress at a Glance

(Rs. in lakhs)

SANCTIONS	Small		Others		Total	
	No.	Amount	No.	Amount	No.	Amount
1974-75 ..	201	212·35	9	93·21	210	305·56
1975-76 ..	497	485·31	12	135·81	509	621·12
1976-77 ..	470	608·03	14	241·07	484	849·10
1977-78 ..	415	417·14	10	125·30	425	542·44
1978-79 ..	1,250	1,108·14	10	150·80	1,260	1,258·94
1-4·1979 to 15-12-1979	1,506	1,007·15	11	205·96	1,517	1,213·11
As on 15-12-1979 since inception.	4,554	4,059·45	106	1,218·98	4,660	5 278·43

DISBURSEMENT	Small		Others		(Rs. in lakhs) Total	
	No.	Amount	No.	Amount	No.	Amount
1974-75 ..	95	62·91	6	43·08	69	85·73
1975-76 ..	177	169·95	7	49·38	184	219·33
1976-77 ..	129	256·18	4	65·03	138	321·21
1977-78 ..	269	311·03	4	26·86	273	337·89
1978-79 ..	509	455·94	6	68·27	515	524·21
1-4-1979 to 15-12-1979	903	550·66	5	56·39	908	607·05
As on 15-12-1979 since inception.	2,519	2,210·40	67	561·08	2,586	2,771·48

THE EAVESDROPPER

Aslam had the bad habit of eavesdropping. His father often warned him but to no effect. One evening while his father was in the garden a gentleman from the city came to the house and asked to speak with him in private about some business. Aslam's father accompanied him to a hut in the corner of the garden and closed the door.

Aslam followed them and wanting to know what they were talking about, he placed his ear against the key-hole. All of a sudden he felt something strange in his ear—a kind of tickling at first, but then there was stinging pain and he began to scream at the top of his voice.

The two men rushed out of the hut and the father who realised what hnd happened sent for the doctor at once. When the doctor arrived he squeezed some liquid into the boy's ear and a little while afterwards a warm came crawling out of its new residence.

" This is the punishment that you merited," said Aslam's father. "Let this be a lesson for you in future. He who finds difficulty to mind his own business when he is still young will find it much more difficult later on in life and the consequences will be greater than a mere worm in the ear."

Don't poke your nose in other people's affairs.

Two devotional poets of ancient Oriya literature

DR. JANAKIBALLAV MOHANTY

The cultural heritage of Orissa dates back to the pre-Buddhist times. It has been enriched to a great extent with the spread of Aryan culture through the scriptures like "The Ramayana", "The Mahabharata" and "The Srimad Bhagabata" written in Sanskrit and through the propagation of different religious cults by Indian sages and religious preachers who visited this holy land to acquire wisdom and bliss. This has resulted in the growth of devotional literature in Orissa from the early period of its cultural history. It can be said without hesitation that most of the authors of the ancient and medieval periods of Oriya literature are religious minded or devotees of some gods or godesses.

Out of the religious cults that influenced most was Vaisnabism and the contribution of the poets who embraced Vaisnabism deserves special mention. Their poetic creations, besides enriching Oriya literature, added strength, beauty and charm to the language. Among the Vaisnab poets Jagannath Das of the sixteenth century and Deena Krushna Das of the seventeenth century are two towering figures who greatly influenced the national life and literature of Orissa.

JAGANNATH DAS

Jagannath Das was born in a Brahmin family in the village of Kapileswarpur near Puri in the last decade of the fifteenth century (1490 A. D.). His father used to explain in Oriya the Sanskrit scriptures in the Puri temple and for this Purusottam Dev, the then King of Orissa, conferred on him the title of Purana Panda. He showed great promise and versatility during his early days and could acquire mastery over Sanskrit lexicography, grammar, poetics, dramas, and the Vedas.

His mother was also a pious lady. He lost his father in his childhood. He used to walk from his village to Puri, a distance of about five miles along with his widowed mother to visit the temple. It is said that it was at the instance of his mother, who could not fully understand the explanations given by the Sanskrit Pandits in the Puri temple, that Jagannath translated the Bhagabat from Sanskrit to Oriya. He has written many books in Oriya and Sanskrit. But it is this translation of the Bhagabat which is his most outstanding work.

Jagannath Das used to recite and explain his poetical translation of the Bhagabat in the premises of the Jagannath temple. This recital attracted a huge crowd everyday. It was during one such occasion that he met the great devotee and preacher of the Baishnab cult, Shri Chaitanya Dev. Shri Chaitanya was greatly impressed by the profound devotion and learning of Jagannath and there grew a life-long spiritual bond between them. Although Chaitanya had many disciples, he admitted the greatness of Jagannath Das and used to address him as "ATIBADI", which means a very great devotee. Since then Jagannath Das came to be known as Atibadi Jagannath. The followers of Jagannath formed into a community known as 'Atibadi Sampradaya' or the Community of the Great.

He lived a life of 'Sannyasi' practising austere penance in a hermitage on the sea-shore of Puri. The name of the hermitage is 'Sata Lahari' and it was here that he spent most of his life in meditation and writing. While giving religious instructions to his disciples, his soul left the mortal coils in 1550 A. D. when he was sixty.

His writings—Krushna Bhakti Kalpalata, Krushna Bhakti, Kalpalata phalam, Premasudhambudha, Nitya Gupta Mala, Upasana Satakam, Nitya chara, Neeladri Satakam, Jagannath Chaitanbodhi Sarana are some of his well known Sanskrit writings. Among his Oriya writings, however, Daru Bramha Geeta, Tula Bhina, Mruguni Stuti, Pasanda Dalan, Gaja Stuti, Artha Koili, Gupta Bhagabat, Mahabharat are noteworthy. But it is his Oriya Bhagabata composed in the metrical form of nine lettered lines is a book known in every house all over Orissa. This is not an actual translation of Vyasa Deva's Sanskrit Bhagabat. Rather, the ideas in various slokas (verse) have been faithfully transmitted in a highly lyrical, lucid and simple Oriya language. In other words, this is a work of transcreation.

Jagannath Das has shown great originality in the use of language and it would not be wrong to say that it was he who first gave a standard coloqual form to the Oriya language. The manipulation of simple, sweet and passionate words shows the best thought expressed in the best possible manner. The popularity and the appeal of the Oriya Bhagabat can well be assessed from the fact that Jagannath Das is quite well known in every Oriya home. The establishment of the Bhagabat Tungis in every Oriya village where the Oriya Bhagabat of Jagannath Das is read, recited and interpreted with reverence every evening is exclusively due to immense popular appeal of the work. The Oriya Bhagabat is a monumental work of thirteen volumes written by this great genius. The last two volumes were additions, composed in the same manner by Mahadev Das, an eminent poet. The metrical form which is so efficiently exploited in this work has become a very popular and attractive one. The capacity and simplicity and naturalness with which Jagannath Das has expressed the profound religious and philosophical ideas in these volumes bears evidence of what he could do to language itself.

Jagannath Das is the most quoted and quotable Oriya poet. Many of his lines have become sayings and proverbs because of their brevity and wits.

Jagannath Das belongs to the Vaishnab cult of Orissa. He is the founder of a particular school of Vaishnabism known in Orissa as 'Utkaliya Vaishnab or Atibadi Sampradaya' (The community of the great devotees). This school professes that 'knowledge is not an obstacle but complementary to spirituality and piety. They accept Lord Jagannath as the Supreme Lord, God and all other Divine Incarnations are but his manifestations.

His Darubramha Geeta deals with the sacred place of Puri and Lord Jagannath in three cantos written in his usual simple style. 'Artha Koili' is a very impressive work on the theme of spiritual exercise and deep metaphysical and philosophical thought. Besides, his devotional songs and lyrics have earned for him a great honour. In 'Tulavina', we find the examples of early Oriya prose. Jagannath Das is undisputedly the greatest and the most influential medieval Oriya poet, whose Bhagabat was a source of inspiration for many posterior writers.

DEENAKRUSHNA DAS

Deenakrushna Das is an outstanding Oriya poet of the medieval Oriya literature. A few volumes of writings on various themes with his colophone are available. Some critics opine, there were two persons with the same name. But both the persons were actually one and the same and it is the contribution of this single person which enriched the medieval Oriya literature.

Not many details about him are available. He was born in Jaleswar in the State of Orissa and was contemporary of Mukunda Dev (1651—1686 A. D.) and Dibyasingha Dev (1686—1713 A. D.) the then Kings of Orissa. A major part of his life was spent in the holy centre of Puri. His mastery over varied subjects like Sanskrit rhetorics, poetics, grammar, scriptures, astrology, classical medicine etc., made him a figure of eminence. But his domestic life was singularly fraught with continued poverty and ailments. The ruler of Orissa, the then Maharaja of Puri, promised him many allurements provided Deenkrushna wrote a panegyric in the king's honour. The poet was threatened as well. But undaunted as he was, he rejectad all such offers and remained resolute in glorifying the lord through his writings. He was a devoted worshipper of Lord Jagannath, and a sincere follower of the Orissa Vaishnab cult. It is said that he was inflicted with the horrible disease of leprosy and yet he used to visit the Puri temple of Lord Jagannath and sing his devotional songs in a most moving voice everyday. But the ruler of Puri banished him from his holy land of Lord Jagannath out of sheer vengeance and vengefulness. The exact time and place of the poet's death is still unknown.

Writings of Deenakrushna

Deenakrushna has about 15 poetical volumes to his credit, among which the most famous one is Rasa Kallola. Rasa Binoda, Guna Sagar, Bhaba Samudra, Amruta Sagar. Tattwa Sagara, Bhuta Keli Alankora Bali and Naba Keli are some of his notable creations. He earned a great reputation in writing Chautisa and other lyrical poems about Radha and Krushna. Rasa Kallola is not only his best, but also a unique piece of poetry in Oriya literature. Deenakrushna's literary contributions for the common mass is not of a mean order. His 'Prastab Sindhu' consists of balluds written in allegories, and the style, tone and treatment of the books is marked for its simplicity and piety. Most of his ballads are based on parables drawn from the Sanskrit classics of Hittopadesha and Panchatantra and the rest are inspired by his own imaginative instinct. The most recurrent themes of his writings are the glorification and the portrayal of the divine drama of deities he worshiped, viz., Lord Jagannath, Sri Radha and Sri Krishna.

Rasakallola has a distinct place in Oriya literature for its sheer poetic excellence and mellifluousness. Its deals with the amours of Krushna with the maidens of Gopapura and consists of thirty-four melodious cantos and each line of the cantos begins with the initial sound 'Ka', the first consonant in Oriya language. This device proves his poetic ingenuity and mastery over the lexicon of the Oriya language. The cantos are again musically conditioned according to the Ragas and the Raginis (musical notes and tunes) prevalent in Orissa. Deenakrushna has shown matchless skill in painting the natural cycle of seasons and seasonal amours and romantic adventures associated with ths seasons. The title of the poem indicates the intention of the poet to rouse 'sentiments' (Rasas). Dexterous employment of rhetorical devices, particularly assonance, alliteration, similes and metaphors has enhanced the richness of the poem. Two examples may be cited here —

Description of Summer

"Krame madhur sesa holi prabesh
Hela grisama samaya
Karamali kar maha kharatara
Kamala Kumar Paraya
Sujane, ki kahiba mahi tapata
Karaila nrutya pathika padaku
Sangramma bhumi aswa bata. I
Kusal nartaki bhramari paraye
bhramile batachakramana
Kutumbi deen janamana paraye
Santapi hele eka dine
Sujane, Krusha hoile nadikula
Kanta Ghanarasa napai jemanta
Huanti birahahini kula.
Kurangi narayana nayana taranga
Bali mruga trushna disile
Kala megha kola bijuli paraye

Bare bana agni hasile
Sujane, kunja bhitare Pakhimane
Kebala Jogi dhyanakala paraye
Nischale rahile maure." II.

Spring is gone and summer has come with the scorching rays of the sun shining like fire. Learned friends, the heart of the earth makes the travellers' feet trot like a war horse while winds dance like the swirl of skilled dancer, like the mind of a poor man with a large family the days feel tortured and the river trickles into narrow streams, learned friends, the birds in the groves look still motionless like the yogi in meditation.

Poetry in the medieval age was rather sung and recited than read. People used to relish it and enjoy the 'sentiments' roused by listening to poetry. That is why Deenakrushna aptly describes the nature and function of poetry as—

"Kabita banita kabita pita
Kahiba lova tara upamata
Kale bhaga taku rasika neta
Kebehoss aba rahai yogyata
Kamanti guanar kebal baimatra bhaitara
Kabitwa malaya pabana bota
Kar nasik tara pallabita
Karkasa murakha suskhataru matra
Ketabelahas nadharai patra
Kumini behaba
Karainibi napunsaka draba"

Poetry is a damsel, the poet its father, the reciter its adopted mother. Its charms are realised only when enjoyed by the connoisseur. The dull rustics are its hostile step brothers, like the spring breeze it brings blossoms on connoisseur who is compared to a flowering tree while never do the blossoms come on an idiot, who is like a dead wood. For surely not the charms of a woman excite a eunuch.

Centering round the drama of Shri Radha and Shri Krushna, Deenakrushna has written many songs and chautisas overflowing with a. sort of mystically human and divine love. Chautisa, as practised and popularised in the prolific writings of Deena Krushna, are a type of metrical composition in which every line begins with the consonants with their alphabetical sequence. It was he, who popularised this particular form of lyrical composition. Artatrana Chautisa is his most popular and widely known devotional composition. He has many lyrics inspired by his devotion for Shri Krushna and a mystical sense of human love. Thus he has established a tradition and an ideal in Oriya poetry and for which he remains an immortal Oriya poet.

Head of the Department of Oriya
Ravenshaw College
Cuttack-753003

"At this supremely dangerous moment in human history, the only way of salvation for mankind is the Indian way. The Emperor Ashoka's and the Mahatma Gandhi's principle of non-violence and Shri Ramakrishna's testimony to the harmony of religions: here we have the attitude and the spirit that can make It possible for the human race to grow together into a single family and, in the Atomic Age, this is the only alternative to destroying ourselves."

More care after the harvest of rice

SHRI HARA PRASANNA DAS

The country has made great advances' in the production of foodgrain including paddy. The emphasis has been on use of high yielding varieties, application of fertilizer and adoption of plant protection measures. Farmers have adopted the given technology fast but this simultaneously has led to the problems of timely harvest. threshing, cleaning-gradidg, drying, storage, milling etc. It is estimated that above 5·15 per cent of paddy produced is lost in the above operations.

Considering the importance of improved' post harvest practices, I. C. A. R. constituted an All India Co-ordinated Post Harvest Technology Scheme working at 10 centres namely : Cuttack, Bhopal, Coimbatore, Udaipur, Kharagpur, Jabalpur Ludhiana, Patnanagar, Raichur and Akola. Besides these centres, the work on postharvest technology of rice is being carried out at Central Food Technological Research Institute, Mysore. Paddy Processing Research Centre, Thiruvarur, Oil Technological Research Centre, Anantapur (Andhra Pradesh) etc.

Some details of the work being carried out on different aspects of postharvest technology is being given below.

1. Harvesting

Improper harvesting and threshing may result in losses of up to 2-3 per cent of the crop, therefore, better pcduction techniques are not alone sufficient to solve food problem. Attention must also be paid to the correct methods for harvesting and immediate threshing to minimise field losses. These two process constitute about 30 per cent of the total time in producing clear dry paddy that is ready for milling.

Different agro-practices like time of harvest, dose and mode of Nitrogen application, land and schedule of irrigation. and other management practices largely affect the nutritional and milling qualities of paddy. Work on these aspects is being carried out at Central Rice Research Institute. Cuttack and also at Indian Institute of Technology, Kharagpur, Central Food Technology Research Institute, Mysore Paddy Processing Research Centre, Thiruvarur (Tamilnadu).

2. Drying

The advantages of early harvesting have been established by the research work carried out at different Institutions. The technology says that the farmers can draw the maximum benefit by harvesting paddy crop at 20-25 per cent moisfure content (wb) when pagdy gets matured. However, the harvesting of high moisture paddy invites the problem of drying. Sun drying of harvested crop as well as threshed grain, although very cheap, is very slow and is entirely dependent on sun shine. Alternatively, drying can be done by mechanical drying including Solar drying,

The available dryers are quite expensive. It is strongly felt that a low cost mechanical dryer using locally available organic fuel (agro-waste) and energy should be developed.

Central Rice Research Institute has developed a Solar dryer (1 tonne/day) for grain drying. The work on development of grain dryers has been done at Indian Institute of Technology, Kharagpur, Universities of Patnagar, Ludhiana, Coimbatore and also at F. C. I.

3. Storage

With the increase in food production, the problems of storage and particularly storage loss is assuming great significance. There are several factors responsible for the quantitative and qualitative losses during storage, viz., physical (temperature and moisture), biological (produce properties, insects, rodents, moths, microorganism, etc.) chemical (breakdown of produce and pesticides) and engineering (structural, i.e. air and moisture hightness, proveness to insect and rodent attack, etc. The safe level of moisture content for paddy storage is 12 per cent for long term storage and 14 per cent for short term storage and the temperature should be below 25°C.

The losses in traditional structures are heavy up to 8'10 per cent. Both metallic and non-metallic structures/containers are in vogue for storing paddy.

Considerable work on improvement of storage stuctures and prophylactic measures for insect and rodent control has been done at Indian Grain Storage Institute, Hapur, C. F. T. R. I., Mysore, C. R. R. I., Cuttack, I. I. T., Kharagpur and P. A. U.. Ludhiana.

4. Parboiling

The parboiling is basically a process of geletinization of grain starch. Various methods are prevalent in the country. In traditional methods paddy is soaked for 24·72 hours in cold water than steamed (boiled) till husk starts splitting, sometimes paddy is boiled twice (before and after soaking). These methods take long time and because of long periods of soaking, an unpleasant, smell starts developing which also passes into the milled paddy. The smell is actually caused by mycrobes by acting on rice *materials passing into the water* (leachate).

C. F. T. R. I., Mysore developed an improved method *for paddy parboiling* few years ago. This merhod consists of soaling paddy in hot water (70-75°C) for 3·4 hours steaming at for a short time and then drying it.

I. I. T., Kharagpur has done considerable work on parboiling C. F. T. R. I., Mysore, P. P. R. C., Tiruvaru and C. R. R. I., Cuttack are also doing useful work on paddy parboiling.

5. Milling

Most of the rice mills in the country consists of hullers (dehusking by abrassion) numbering nearly 75,000. The hullers are used both for dehusking and polishing. At many places both the operation are done in single pass resulting in heavy breakage (5-6 per cent raw rice is lost as powder of fitnes) Between 20-30 per cent of the oil present in bran is also removed along with the husk which gets partly powdered in the process. In parboiled rice, total losses are less but still considerable. Though it removes valuable constituents, the huller bran makes a poor animal feed because of high proportion of associated husk.

For improving the milling efficiency and reducing the losses and breakage, more efficient milling equipment, i.e. a combination of rubber roll shellers, paddy separator and a cone polisher are being increasingly used.

Rice Process Engineering Centre (I. I. T., Kharagpur) C, F. T. R. I., Mysore, PPWC, Tiruvarur are doing considerable work on rice milling. Useful work at CRRI, Cuttack on milling aspects is also being done.

6. By-products—Utilization

(a) Rice bran oil—It is a high class oil with composition approximating to that of gingelly (seasamum) oil. Its low linolenic acid content gives it a distinct advantage over cotton seed and soybean oil.

The bran is not stable after it is removed from brown rice. The associated enzyme lipase splits the oil at a fast rate into fatty acid and glycerol. Sometimes splitting is so fast that FFA (free fatty acid) increase is in the order of 1 per cent per hour in the case of raw rice bran. However, in the case of parboilad rice bran, the problem is less as heat received during parboiling records the increase of FFA.

Different treatments of bran stabilization like chemical, irridication, refrigeration, heating, air tight storage etc. have been worked out by various institutions.

O. T. R. I., Annantapur, CFTRI, Mysore, R. P. E. C. (IIT). Kharagpur, P. P. R. C., Tiruvarur, PAU. Ludhiana, GEPAU, Pantnagar. CRRI, Cuttack and Jadhapur University have done and are doing useful work on bran stabilization.

Use of Solar energy in bran stabilization deserves special attention. Recently a Solar bran stabilizer has been developed at CRRI.

(*b*) *Other bi-products*—There is enough scope for utilization of paddy husk/ash for manufacture of Sodium Silicate, activated carbon, particle board. detergent for dishes and floor washing, oxalic acid, xylasc and derivatives, insulating material, packing material, fuel for furnance, seed and feed diluent etc,

Work on preparation of light weight cement from husk/ash has been taken up at C. R. R· I. Roorkee, RPEC (I.I.T.), Kharagpur and CBPHAT, Patnagar.

RPEC, Kharagpur has also developed a husk fired furnance for drying and other processes. Extraction of silicon from husk is also being tried out at this place.

Treatment of paddy straw for making it more palatable feed for animals has been taken up at I. V. R. I., Izatnagar.

Central Rice Research Institute,
Cuttack-753006.

SPECIAL EMPHASIS ON DUG WELLS and TUBE-WELLS IN SUNDARGARH

The District Development Committee under the chairmanship of Collector, Sundargarh have laid special emphasis on sinking of tube-wells and dug wells in the district in its meeting on December 14 last. From the review it was revealed that during the current year 1979-80 till end of November, 371 dug wells have been sunk and 30 more applicants have been sanctioned funds. The district administration has a plan to sink as many as 2,320 dug wells during the current year. Similarly, in respect of energisation, 41 dug wells have been energised and 127 loan applications in this regard have been sanctioned. The target for energisation during the current year has been set at 236. The Committee laid emphasis on sinking of 60 tube-wells, especially in the drought-affected areas of the district.

Some aspects of Eucalyptus planting

SHRI K. K. RATH

The choice of species in forest plantations should be in keeping with the National Policy as well as the needs of the people. The plantation programme has to be suitably oriented to meet the economic, social, industrial and commercial needs so as to form a part of social and economic policy of the country as a whole. Extensive plantation of Eucalyptus in India constitutes a part of a programme based on the National Policy for higher production of wood for domestic, commercial and industrial requirements. Eucalyptus is a broad spectrum species with all the desired qualities to serve such a purpose. It is not only fast growing, but also yields fairly good timber, excellent pulping material, good fuel and provides cover to the soil.

In the 18th and 19th century certain species of Eucalyptus (not the varieties grown in Orissa) were planted in the "Pontine Marshes" near Rome and these marshes were reclaimed. An impression, thereafter, has gained ground that Eucalyptus is a species that draws a lot of water from the sub-soil. Recently some environmentalists and social workers in India have criticised the plantation of Eucalyptus by State Forest Departments. It is alleged that Eucalyptus plantations consume a lot of sub-soil water and thereby drying local water sources such as streams, wells, etc., Plantation of Eucalyptus on an extensive scale, some fear, even dries up the atmosphere of the region. By replacing miscellaneous forests with Eucalyptus plantations the insect and bird population in the area is alleged to be affected. Exaggerated reports about the harmful effects have appeared in some of the Indian newspapers and magazines which give rise to doubts about the usefulness of Eucalyptus in public mind. Based on the research work done on this subject within the country and abroad it has become necessary to remove the erroneous impression that this species is detrimental to the water resources and atmosphere of the country.

There are 600 known species of Eucalyptus of which a very few thrive under water-logged conditions. Most of the Eucalyptus grow under varying conditions of water availability and one cannot generalise that all Eucalyptus depletes the local water resources. Had this been so, many of them would have ceased to exist and large areas in countries where Eucalyptus occurs naturally, or is exclusively grown (Brazil, Chile, Argentina, Australia, Algeria, Italy, New Zealand, Maxico) would have been converted into deserts by now.

Experiments conducted in India have shown that Eucalyptus allows more rainfall to reach the forest floor as compared to Sal, Chirpine and Teak. The figures are 90 per cent for Eucalyptus, 75 per cent for Sal, 78 per cent for Chirpine, 80 per cent for Teak, 72 per cent for Babul and 74 per cent for Chatian. Eucalyptus offers more opportunities for water to infiltrate into the soil. In fact, in Australia—home of

Eucalyptus—many water sheds under Eucalyptus forests are exclusively managed for Municipal water-supplies in Brisbane and Canberra. The Government of Tamilnadu had appointed an Expert Committee in 1970-71 to examine the effect of large scale planting of blue-gum (Eucalyptus) on rainfall in Nilgiris. It was tentatively concluded that timbered areas probably collect an additional 2·5 inches of water per annum compared with treeless areas. They studied the Australian experiment in Gulthera catchment where it was recommended to plant up the deforested areas with Eucalyptus which could reduce the surface run-off and soil loss and increase the water yield by 10 per cent of the total flow.

Investigations carried out in Israel have proved that as compared to rainfall in the open where the loss of water due to surface run-off is quite high, Eucalyptus plantations permit about 85 per cent to 86 per cent of the rain water to be absorbed in the soil. Indian experiments have shown that the interception of rainfall by Eucalyptus trees was only 11·56 per cent as against 25·3 per cent for Sal, 26 per cent for Chatian, 22·1 per cent for Chirpine. In other words, the rainfall availability to the soil in Eucalyptus plantation is much more than with some of our native species. By aforestation with Eucalyptus over 20,000 hectares of hilly region in Southern Italy it was observed that soil erosion was considerably arrested and a satisfactory regulation of water flow could be maintained.

An adverse propaganda against Eucalyptus that a single tree can consume up to 8 gallons of water per day is an exaggeration. Eucalyptus rests hardly extend beyond 1 metre deep inside the soil (maximum resting depth being about 3 metres) with a lateral spread of maximum 3·5 metres. From this small area, loss of 8 gallons of water per day from the sub-soil is quite high. A comparative study of the consumption of water per unit gram of dry matter produced by different species shows that in case of Eucalyptus it was 1·41 mm. as against 2·59 mm. for Sissoo, 3·04 for Poplar, 8·87 mm. for pine. This is an important observation leading to a hypothesis that the consumption of water of Eucalyptus is the least. In case the water requirements of Eucalyptus was high it would not have been possible to raise successful plantation of this species in water deficit areas of Central India and lateritic belts of West Bengal.

The other aspect is whether there is any adverse effect on avifauna and insect population due to replacement of natural forests with Eucalyptus plantation. In Orissa hardly any Eucalyptus plantation is raised by clear felling existing natural forests. It is planted in denuded forests and waste lands devoid of tree cover. Eucalyptus is usually planted in barren lands. Hence destruction of the habitat of the avifauna due to removal of existing forests and extensive practice of monoculture is not a problem as far as this State is concerned. Even where monoculture with Eucalyptus is practised this adverse effect can be eliminated if natural strips of existing forest/bushy growths are left around the planting areas and some strips within the planted sites to create fringe effects.

The above aspects were discussed in the Central Board of Forestry, the highest policy making body and the forestry experts attending this national advisory body were unanimous that Eucalyptus planting inspite of the thin high crown of this species, exerts profound influence on the soil moisture regime of an area and conserves soil moisture to a considerable extent. The National Commission of Agriculture in their report and the National Council of Applied Research in their prospective plan prepared for our State have recommended plantations of Eucalyptus to increase wood production per hectare to meet the increasing demand of wood, fuel and pulp of the nation. Whereas the average annual rate of growth per hectare from natural forests is about 0·5 m^3 of wood and from Teak plantation about 1 m^3 to 2 m^3 per hectare, Eucalyptus plantations can give a minimum yield of 5 m^3 per hectare per year. The multiple use of Eucalyptus as raw material and its numerous beneficial effects outweigh the possible adverse effects.

In our coastal areas the people have realised the utility of this plant and there is demand for seedlings to plant in their own holdings. Small poles of about six to ten years old are sold locally at the rate of rupees thirty each. So there is no doubt that this species has proved its worth both to the foresters and agriculturists without any harmful effect.

Under-Secretary to Government,
Forest, Fisheries & Animal Husbandry
Department, Bhubaneswar.

ORISSA'S FIRST RURAL HOUSING AND ENVIRONMENTAL DEVELOPMENT PROJECT LAUNCHED

In a bid to overcome the shortage of fire-proof dwelling houses in rural areas as also to provide better environmental amenities, the first demonstration project on cluster of rural houses and environmental development was launched in Orissa at village Subalpur under Jasuapur Grama Panchayat of Pipli Block in Puri district last week.

The project being implemented by the State Government in collaboration with the National Building Organisation of Government of India envisages construction of a cluster of 20 dwelling houses over an area of 1·55 acres of land at an estimated cost of Rs. 88,000. Environmental amenities like approach road to all houses, playground, community hall, children's park, sanitary well, etc., would also be provided in the village. The National Building Organisation will meet one third of the cost of the construction of the dwelling house and the entire cost of environmental development. In the process, a beneficiary has to pay only a small amount of Rs. 1,136 over a period of 20 years with interest. The State Government have provided land free of cost.

It is proposed to set up one such demonstration project in each of the 13 districts during the current financial year.

Laying the foundation of the new project, Orissa's Minister of State for Housing and Law, Shri Ignace Majhi said that out of 4·30 crore houses needed in the entire country at present, over 3 crores of such houses have to be constructed in rural areas. He pleaded for use of local raw materials in building fire-proof houses in rural areas. The Minister commended the efforts of the National Building Organisation who have collaborated in setting up of such demonstration projects.

Shri N D. Sanyal, Representative of the National Building Organisation spoke about the details of the proposed scheme and sought co-operation of the local people to ensure successful implementation of the same.

Among others, Shrimati Kiran Lekha Mohanty, M. L. A., Shri U. N. Mallik, Secretary, Labour Department; Shri N. Tripathy, Labour Commissioner; Shri A. K. Dey, Vice-Principal, Bengal Engineering College attended the function.

The Nucleus of Industrial Activities in Orissa

SHRI J. S. BAIJAL

The I. D. C. was set up during the year 1962-63 with an authorised capital of Rs. 50·00 crores. At present there are seven industrial units engaged in different activities being operated under its direct control in different parts of Orissa. Besides the Corporation has a fully subsidiary Company named East Coast Salt and Chemical Industries at Sumandi in Ganjam district producing industrial and edible grade salt. The paid up share capital of the Corporation has increased by the end of March 1979 to Rs. 21·00 crores.

The physical performance of the I. D C. of Orissa, during the year 1977-78 and 1978-79 has improved considerably compared to that of the previous years and subsequently up to date the progress is still encouraging. Production and sales of different units in term of money in the year 1978-79 came to Rs. 30·42 crores and Rs. 31·27 crores, respectively. In 1979-80 up to the end of December the figures come to Rs. 28·00 crores and 29·00 crores, respectively.

During the year 1978-79 Hira Cement Works have achieved a production of 398,472 MT. of cement which is about 101 per cent to the rated capacity, and Hira Cable Works have also achieved a record production of 2,426 MT. of aluminium conductor which is about 80 per cent to its licenced capacity.

The export performance of the Corporation during last two years up to December 1979 is detailed below where it is clear that it has earned foreign exchange of about Rs. 12 crores during the period.

Pig Iron

			MT.	Rupees
1977-78	..	Russia Korea Bangladesh	26 000	2·46 crores
1978-79	..	Iraq Bangladesh Korea	37,000	3·69 crores
1979-80 (up to Dec.)	..	South Korea ..	10,000	1·21 crores

		MT.	Rupees
High Carbon Ferrochrome—			
1977-78 ..	Phillipines Holland Italy Japan	4,500	1·71 crores
1978-79 ..	Phillipines Italy	1,700	0·78 crores
Low Carbon Ferrochrome—			
1978-79 .	Japan Holland Germany	2,100	1·39 crores
1979-80 (up to Dec.) ..	North Korea ..	900	0·64 crores

The Corporation has earned a net profit of Rs. 1·02 crores at the end of the year 1978-79 and has wiped out the accumulated trading losses of the past years.

During 1979-80 in the first six months the net profit is Rs. 1·58 crores after providing depreciation of Rs. 0·68 crores and interest of Rs. 0'39 crores against a profit of Rs. 0'22 crores earned during the corresponding period of last year. In respect of profit the Corporation has achieved more than its target. This is the highest profit so far earned by the Corporation.

The Corporation has paid to the State and Central Exchequers during the two years Rs. 10·87 crores, the break-up of which is as under:—

	1977-78 Rs. in lakhs	1978-79 Rs. in lakhs
C. S. T. ..	48·21	68·09
O. S. T. ..	40·62	81·91
Excise duty ..	3,54·19	3,28·05
Custom duty ..	10·41	11·52
Mining & Royalty and Cess.	21·13	19·00
Electricity duty ..	49·38	54·36
Total ..	523·94	562'93

Besides operating 7 industrial units under its direct control the Corporation has also participated in setting up different industries in Orissa under joint venture. Out of these the Konarak Jute Mill at Dhanmandal of Rs. 7·00 crores set up with the National Agricultural Co-operative Marketing Federation of India Ltd. started production in the

High Carbon Ferrochrome—

			MT.	Rupees
1977-78	..	Phillipines Holland Italy Japan	4,500	1·71 crores
1978-79	..	Phillipines Italy	1,700	0·78 crores

Low Carbon Ferrochrome—

1978-79	.	Japan Holland Germany	2,100	1·39 crores
1979-80 (up to Dec.)	..	North Korea ..	900	0·64 crores

The Corporation has earned a net profit of Rs. 1·02 crores at the end of the year 1978-79 and has wiped out the accumulated trading losses of the past years.

During 1979-80 in the first six months the net profit is Rs. 1·58 crores after providing depreciation of Rs. 0·68 crores and interest of Rs. 0·39 crores against a profit of Rs. 0·22 crores earned during the corresponding period of last year. In respect of profit the Corporation has achieved more than its target. This is the highest profit so far earned by the Corporation.

The Corporation has paid to the State and Central Exchequers during the two years Rs. 10·87 crores, the break-up of which is as under:—

		1977-78	1978-79
		Rs. in lakhs	Rs. in lakhs
C. S. T.	..	48·21	68·09
O. S. T.	..	40·62	81·91
Excise duty	..	3,54·19	3,28·05
Custom duty	..	10·41	11·52
Mining & Royalty and Cess.		21·13	19·00
Electricity duty	..	49·38	54·36
Total	..	523·94	562'93

Besides operating 7 industrial units under its direct control the Corporation has also participated in setting up different industries in Orissa under joint venture. Out of these the Konarak Jute Mill at Dhanmandal of Rs. 7·00 crores set up with the National Agricultural Co-operative Marketing Federation of India Ltd. started production in the beginning of 1979. The second one the Sodium Dichromate Plant at Talcher of capital cost of Rs. 3,60 crores i.e. being set up in collaboration with a private enterpreneur. The construction work of the Project is in progress. The Corporation is also going to set up a Cable unit at Baripada with capital cost of Rs. 10·00 crores in collaboration with the National Indulated Cable Co. of India Ltd., to manufacture 700 KM. of XLPE and PVC power Cables per annum for voltage up to 66 KVA. It is scheduled to start production by 1981 orders for supply of machinery and knowhow has been placed with a foreign firm.

The joint sector agreement has already been executed and a company by name M/s. NICCO ORISSA LTD. has been floated. Location is selected at Baripada in Mayurbhanj district and possession of land has been taken up.

The Projects which the Corporation is now actively pursuing are the following

Sl. No. (1)	Name of the Unit (2)	Capital outlay (3)	Annual Capacity (4)
1	Cement Grinding expansion at Hira Cement Works, Bargarh.	Rs. 5·97 crores	1·2 lakh tonnes cement additional over 3·96 lakh tonnes present capacity.
2	Mini Cement Plant at Kutra, Kiringsera, Sundergarh.	Rs. 5·00 crores	65,000 tonnes of cement
3	Spinning Mill at Sonepur, Balangir district.	Rs. 6·00 crores	25,000 spindles per annum
4	Ductile Iron Spun Pipe Plant at Kalinga Iron Works, Barbil.	Rs. 5·29 crores	36,000 tonnes of indigenous grade spun pipes out of which 14,500 tonnes of export grade.
5	Development of Salt field in Balasore district.	Rs. 7·00 crores	1·20 lakhs tonnes of high quality edible and industrial grade salt per annum.
6	Properzi Mill at Hira Cable Works, Hirakud.	Rs. 1·32 crores	6,000 tonnes of properzi rods
7	Refractory Unit at Tile Factory, Choudwar.	Rs. 0·20 crores	2,250 tonnes of Fire Bricks and mortar.
8	Expansion of Ferrochrome Plant at Jajpur Road.	Rs. 7·50 crores	Additional 15,000 tonnes of High Carbon Ferro chrome per annum.

The Corporation has also taken up planning for an Import Substitute Piping unit to manufacture special type High Pressure Tubings, T's, L's, etc. for Boiler Plant, chemical and fertilizer plants, etc., a large sized cement plant in Koraput district and a steel sheathed Telephone Cable Unit at Hira Cable Works.

On rationality and man

SHRI B. K. MISHRA

Of the most universal descriptions of man the most universal is 'Man is a rational animal'. We must congratulate ourselves for this wise saying which summarises all that man has ever been, and perhaps, shall ever be. Therefore every wise man, who is essentially rational, should spend at least ten minutes in admiring this memorable piece of pearl and then another ten minutes in admiring himself for admiring the grandness of human intellect. This will certainly purify his foggy mind and eliminate all bogus thoughts of faith and belief.

Now we can attempt at streamlining our contemplation regarding this great definition: Man is a rational animal. Which means, I am an animal who is rational. So my rationality must conform, first, to the total unconscious of the animal kingdom, and, two, to my conduct and character which is but an expression of this great heritage of mine, animality.

Suppose I am a tiger. My rationality will certainly hold good if I choose to give a bite to a man who pulled me out of an old, decrepit well. I can surely sit at my table and demand the breakfast of a weak, small and pitiable rabbit or lamb to be brought to me since I am the king. Even I can go about in the forest and pride myself by killing those unnecessary appendage to animal kingdom, rats and bats and cats. I am the king, and kings are always kings. They must be powerful and powerfully rational. But you cannot expect a king to be rational in the rabbit way or the monkey way or the lamb way, can you? When I am powerful. I can still be very rational to want to have absolute power; and since absolute power always goes with absolute wisdom, it is always absolutely rational. Only irrational and jealous men say absolute power corrupts absolutely.

Let us think I am a serpent. If I am sly, sleek, slow-moving or fast-moving at my will, hiss and hit even without least provocation and don't much bother who is friend and who is a foe to exercise my vitality which for no fault of mine kills men and animals, am I irrational? I move in the grass, live among the trees and to protect myself against the unwelcome guest who has no business to cut through my sylvan den if I show him who I am without much ado, and quickly mind my own business, am I irrational? If I could not stand any unnecessary show of power and excellence without a real test and offered her a wisdom-fruit, am I irrational? It goes perfectly with my rationality.

Now, none in his proper senses shall accuse me of irrationality if I am a fox and foxy, a wolf and wolfish, a beast and beastly. I can be foxy, wolfish, beastly and keep my rationality in tact. Nobody can ask me why should I be in my shoes, or why should I be comfortable in my own house. If I am not a dog I certainly cannot and shall not behave or talk as one and you cannot doubt my great rationality on this account. My rationality goes with my being what I am, not being what you expect me to be.

So I am a rational animal, and a man too. Now, this is an added beauty and extra greatness. One who is a dog cannot be an ass. This is quite rational. One who is a tiger cannot be a lamb. This too is quite rational. So in case of such flat characters as dog and ass and tiger and lamb and a generation of them, rationality is rather stagnant. It does not grow, it does not attain its perfection and richness as it can in a man. A man be a dog, an ass, a tiger and lamb whenever he likes and still go about as a man. How lovely : It is a philosophical question ; for the sages have said appearances are never realities, and the true character of things and men are always hidden away under diverse forms and features. You can most rationally go on changing appearance provided you are conscious of your inner reality.

I can be a dog faithfully licking at my master. And when better wisdom dawns upon me I can be a tiger prowling him and devur him up. When I am a dog I am rational enough to be a dog. When I am a tiger I am no less rational to be a tiger. When I am a dog I cannot behave as a tiger, and when I am a tiger how can I rationally behave as a dog ? Hence the case of an ass, a lamb, a serpent and a score others, who are also men, is well-founded and well-rational. I am a man which enables me to live a multi-level animal and keep my rationality fully harnessed.

Now, what is this 'being rational' ? Is it not to be consistent with my experiences ? Is it not to be ever in touch with my thoughts and systematically follow them ? Is it not to be sane when I am sane and insane when I am insane ? So my rationality is my own possession. You are not a party to it; or in other words, my being rational or irrational does not depend on your being rational or otherwise. So my rationality is what I choose to be. If I refuse to be affected by your greatness, I can very well refuse to be affected by your slanders ; and I shall be equally rational if I treat your slanders and your greatness as same or your greatness to be slanderous and salnders to be great : And the beauty is, I can go about as a very rational animal.

I am a free man, or you will not call me irrational if I wish to be have as one. Just as you are free to have your nose where it is and tilt it, or twist it, or raise it or expand it, I am free to have my opinions about you; and test it or twist it or change it at my will. Suppose a band of noble traducers came to show me their love and speaking a few things about you ask a little kindness which I am capable of, I shall most rationally allow you to retire from my favour and lead a peaceful life all by yourself. For, should a rational man stick to a particular opinion about somebody even though he finds nothing to counter it? Moreover, I may privately hate you, but why should I wash my linen in the public and say that to everybody? I can most rationally declare in your face that there can be no parallel to my love to you. But if I love you because you have done me a good or because you are my kin, why should I lend my ear to a thousand tales concocted against you? This is perfectly rational as rationality itself: for, I am a rational animal. I can take you as a friend so long you contribute to my ambitions ; but when you seem to mind your own business and take care of your own shoes instead of mine, no rational code shall impute irrationality to me if I take you as my bitterest enemy. So, if I go on improving upon my allegiances to conform to my ambitions it certainly shall not temper with my rationality.

I am all the more rational because I belong to a scientific civilisation. Does it mean that I shall not show my palm to a wise man to know if I can wed my sweetheart or get a first class in the examination or get my promotion? Of course, I can do all these privately and denounce them as irrational and superstition publicly. Should a man be what he professes to be called rational? No wise man has said it. Accordingly to Prof. Robinson or Jefferson or Verma, the leading rationalists of the present century, rationalism consists in publicly denouncing everything as irrational, untenable, superstitious and foolish that you cannot explain. But why should you be labelled irrational even if you stop your running motor car on the road to admire the little pussy-cat who most casually crosses the road in front of you? Does one's rationality put a stop to his aesthetic sensibility? Certainly not. One can be jealous, spiteful, angry, dangerous, conceited, double-dealer, dishonest, selfish, wolfish. agnostic, magnostic and yet be nobly rational, hold up one's finger to the humanity to caution them of all irrational concepts scourging not only their private lives, but also the total progress of humanity. This is because we are extremely rational animals, and rationality is our human heritage.

Readers, how sublime and essential these thoughts must be for our daily growth to higher and higher knowledge ! I have least doubts about your agreement, for has not Shakespeare said of man, "What a piece of work is man ! How noble in reason.... an angel !......the paragon of animals !"

Ravenshaw Evening College,
Cuttack.

"Wisdom-real wisdom is more than knowledge.
Knowledge is the accumulation of facts wisdom is the interpreta-of facts.
Knowledge is culled from textbooks; wisdom comes out of life".
(—Wallace Friday).

"Life is but a bridge we build
To link before and after,
And wise the man who builds his span
Of faith and love and laughter". (Jill Taylor)

"The qreatest widom seems like stupidity.
The greatest eloquence like stuttering.
Movement overcomes cold,
But staying overcomes heat.
So he by his limpid calm
Puts everything right under heaven," (LAO TSE)

"All those who can walk have an equal right to use the roads and paths'
(Rig Veda 2, 13-2).

"The rice grain suffers under the pestle
Yet admire its whiteness once the ordeal is over !
It is the same thing with human beings ;
To be a man you've to undergo the pestle of misfortune." (Ho Chi Minh)

Unification as a theme of scientific imagination and the advancement in high energy physics

SHRI DEBAKANTA MISHRA

Newton, The Path Finder :

One of man's enduring hopes has been to find a few simple general laws that would explain why nature, with all its seeming complexity and variety, is the way it is. At the present moment the closest we can come to a unified view of nature is a description in terms of elementary particles and their mutual interactions. In fact, the unification movement in physics has a glorious past. It began with Newton. It was Newton who first showed that the diverse forces that keep the earth in its orbit around the Sun, make apples fall, give rise to tides, were but different manifestations of a single force, called gravitational force.

Fusion of Electricity and Magnetism :

Newton was followed by Faraday and Maxwell, who could establish without doubt that electricity and magnetism are inseparable phenomena. A unified field called electromagnetic field reveals electricity alone when the observer would be at rest with respect to the electrical matter; while the field formalism would reveal magnetic phenomena when the observer would be in motion with respect to this same matter. The electromagnetic 'unified field' is not the sum of an electric and a magnetic field amplitude. It is rather a fully unified electromagnetic field amplitude of which the electric and magnetic fields are implicit at all times and under all conditions—even though one type of field reveals itself or predominates under particular physical conditions.

Four Fundamental Forces :

With the rapid advancement of atomic and nuclear physics we realised that all matter in the universe consists of a few scores or more of elementary particles, and that all phenomena are the outcome of their interaction through the agency of four kinds of force. They are: the gravitational interaction that all particles experience; the electromagnetic force that accounts for phenomena involving charged particles and the interaction of light with matter; the 'strong' nuclear force that acts between members of the large family of elementary particles called hadrons; and the 'weak interaction' postulated to describe extremely short range interactions of some elementary particles.

Einstein's historic but Futile attempt :

Yet another process of unification was attempted by Einstein. During the last forty years of his career Albert Einstein tried to unify the force manifestations of matter with its inertial manifestations. In the low energy limit, the inertial properties are represented most primitively in terms of the mathematical equations of quantum mechanics. He anticipated that a completely unified field theory would correctly incorporate the equations of quantum mechanics at least as a nonrelativistic approximation for covariant equations, in correctly representing the empirical data in that limit. Thus, Einstein anticipated that a complete theory of matter would be a unified theory that would properly incorporate the 'particle equations' of quantum mechanics in a linear limit of fundamentally nonlinear field theory. He wanted to carry out a programme of unified field with such a structure that under special physical conditions the field would reveal the predictions of one sort of phenomena, such as electromagnetism and under different sorts of physical conditions it would reveal other predictions of other sorts of phenomena, such as gravitation. This unified field would be of the same type as was established by Faraday and Maxwell in unifying electric and magnetic fields. Einstein also suggested in his papers that a significant starting point in formulating such unified field theory would be to examine the underlying symmetry group of general relativity. Since the theory of relativity is essentially a theory of symmetry prescribing a covariance of the laws of nature with respect to the group of continuous space-time transformations that distinguish different frames of reference from which the laws may be represented, the underlying symmetry group is an important starting point for the investigation of a unified field theory. In Einstein's time, this meant an all encompassing mathematical construct that would unite under a single set of equations gravity and electromagnetism. Since then the task has become even more difficult, with the discovery of yet two types of forces mentioned earlier, i.e., strong nuclear force and weak interactions. Most physicists thought that Einstein's lonely quest was hopeless. But he was convinced that such basic harmony and profound simplicity existed in nature.

Electro-weak Force : The Fusion of Electromagnetic force with Weak Interactions.

Unification as an underlying theme has been the source of scientific imagination throughout the ages as has been indicated from the age of Newton. It is quite natural that this unification movement continues even after Einstein, though he could not establish a unified field concept. In fact, the father of relativity could set pysics aflame end left an intellectual legacy so rich and profound that its depth is a source of amazement and discovery.

In 1967, Steven Weinberg, and independently, Abdus Salam of Trieste proposed that the electromagnetic force and the weak interaction are essentially connected. In the mean while each of the four types of interactions have been considered to be the result of a process analogous to radiation or absorption between two interacting particles, the particle radiated or absorbed being characteristic of each of the interactions. It is well established that the electromagnetic phenomena are due to the exchange of massless photons, whereas the gravitational interaction is thought to be due to the exchange of particles called gravitons. Weinberg proposed that the weak interaction is mediated by the so-called intermediate vector boson (IVB) which if it is found to exist well have to be exceedingly massive. Weinberg pointed out that the photon and the very massive intermediate vector boson are close relatives. He also theoretically showed that the intermediate vector bosons are by and large members of the photon family but get their mass by virtue of being associated with broken gauge symmetry groups. Abdus Salam also arrived at the same type of conclusion quite independently.

At the time weinberg—Salam theory was proposed, there was no experimental evidence for or against it, and no immediate prospects of getting any. To this day massive particles like intermediate vector bosons have not been produced directly, but indirect evidence for their existence have been reported. In a paper published under the names of fifty five investigators from seven institutions in a Pan-European collaboration at the CERN Laboratory, two events were found in which a mu-neutrino was scattered by an electron, and several hundred events in which a mu-neutrino was scattered by a neutron and a proton. Recently the later reaction clearly showed up at Argonne National Laboratory and the National Accelerator Laboratory. There is evidence that the 'neutral current' reaction, a new kind of weak interaction predicted by Weinberg involving the postulated neutral massive particles. may be taking place, and so indirectly supports the theory which makes these particles a member of the same family as photons.

The Weinberg—Salam Theory lead to the concept of 'electroweak force,' thus unifying two fundamental forces of nature as different manifestations of the same source. But this theory contained only one major flaw: it applied only to one class of elementary particles. In 1970, Sheldon Glashow completed the concept. He proposed theoretically the existence of a fourth type of quark. In 1974 two or possibly more, massive elementary particles were detected as resonances in electron—positron interactions. Their life time was 10—20 second while the life time characteristic of the strong interactions is 10—23 second. So, they could not be fitted into heavy resonance particle scheme. Among the various theories put forward to explain the existence of such particles one was by Professor Glashow who hypothesized a modification of the quark model by postulating four rather than three quarks. The fourth one he called charm and has a charge of 2/3. The other three quark have no charm. Gerardt' Hooft outlined the proof that Glashow's theory did not contain any flaw.

Possibility of Unification of Electroweak Force with Strong Nuclear Force.

Particles like protons which feel the strong nuclear force appear to be complicated systems of more fundamental particles called gluons. Gluon is believed to carry the so-called strong force, which helps bind together the other tiny particles —Somce 200 at last count—that make up the miniscule world of atomic nucleus. Most of the inhabitants of that 200 sub-atomic partcles dubbed hadrons, a family that includes the familiar photons, pions and K. mesons, are not the ultimate forms of matter we have come to know that they are composed of still more basic particles called quarks. But how do the quarks cling together ? The answer to this question is that they toss gluons back and forth among themselves. Georgi, Glashow, Ellis and his collaborators are trying to establish that quarks have electrical charges and flavour and so they partake in interactions with photons and massive intermediate vector bosons, i. e. quarks can partake in interactions with agents of electroweak interaction. They have established a theory called Quantum Chromo Dynamics (QCD). This theory is very young. High energy physicists are trying to concentrate on deepening their understanding of Quantum Chrome Dynamics and are trying to find the correct 'super-group' symmetry that will enable them to unify strong nuclear interaction with electroweak interaction. At present the simplest candidate for this unifying symmetry group is called SU (5), a sophisticated and complex mathematical concept.

If Quantum Chromo Dynamics can be confirmed as the correct theory of strong interaction then it seems that it will have all the ingredients to hand to build a successful and unified theory. It seems that such a grand unification might also explain the various dimensionless parameters that pervade our universe, like the fine structure constant (L), the magnitude of the Cabibbo mixing angle and the weak electromagnetic mixing angle. The possibility that the proton is not stable is also an amusing consequence.

Scientists are trying their best to discover directly or indirectly the existence of gluon. In the first week of September 1979, at a major meeting of physicists at the Fermi National Accelerator Laboratory in Batavia, the existence of gluon was discussed seriously. For separate teams of experimenters involving 300 scientists from eight countries—turned to West Germany's new PETKA colliding beam accelerator in Hamburg. The powerful machine accelerates electrons to energies of 15 billion ev and sends them barreling head-on into their anti-matter opposites, particles called positrons, coming on high speed from opposite directions. In the past when such experiments have been tried with other accelerators operating at lower energies, the debris from the electron—positron collisions has consisted of only two 'jet's, or streams of hadrons. But this time the physicists saw three jets : as they interpreted the results, two were from a quark and its anti-matter equivalent, the anti-quark; and the third apparently from a gluon. All this was highly exciting news to the nearly 600 physicists from 38 countries gathered at the Fermi Accelerator. If gluons really exist, they are the first strong proof of an esoteric yet extremely important theory, 2 CD. Predicted Israeli theoretical physicist Haim Herari, "Five Years from now when we look back, we will all agree that the gluon was discovered in the summer of 1979".

Will Gravity Remain Unlinked ?

If these speculations are borne out by further theoretical and experimental work we shall have moved a long way towards a unified view of nature—that is towards the fulfillment of one of man's enduring hopes that find expression in this theme of unification, some new and many ancient. Only gravitational force remains ununified. On this point Salam said two years ago, "Then to be more ambitious, can we ever realise the dream of Einstein that these three forces, joined together with gravity, can be shown to be aspects of one single force ? The gauge principle permits such unifications, but unhappily, to verify these ideas would be almost prohibitive. One would need energies of the order of 10^5 Gev to make the unification between these forces apparent, and energies of the order of 10^{19} Gev to make a direct verification of the unification of gravity. An accelerator of energy 10^5 Gev will probably never be built—it would need to have a radius of 200 Kilometres. So, one will have to rely on indirect evidence. This would be rather an unusual kind. For example, some evidence could come about by studying the decay of proton. So far we have assumed that the proton is a stable particle. If the unification ideas of the strong force with the electro-weak are correct, we predict that proton will be found to decay".

Hope for the Future

Unification as a theme and as a strong inspiring urge for scientific imagination will definitely activate scientists of the coming decades to test these ideas. It does not seem irrational to hope that a further link will be forged in the chain of unification of the four fundamental forces. Albert Einstein's seemingly futile dream sounds far more realistic today.

In the centenary year of Einstein's birth, the Swedish Academy awarded the Nobel Prize to Glashow, Weinberg and Salam for their contributions to a theory that explains the relationship between two of nature's basic forces, i. e., electromagnetic force and weak interaction. The research that won them the Nobel Prize is a "triumph of ideas", Weinberg calls it, "even though it has no immediate application". Like politics, music, what have you, this should be a part of human culture", says Glashow. "After all, we have an obligation to try to understand how the world is made up." Commenting on Einstein's attempt to establish an unified field theory Pauli said, "What God hath put asunder no man shall ever join." But in this eventful year, when Einstein's birth centenary is observed all over the world, the high energy physics community is very much optimistic that a grand scheme of unification of three of the fundamental forces may be at hand, even though the fourth one (i. e., gravity) is not yet included. It is evident from the above quoted statement of Salam that role of gravity and its incorporation in the ultimate unification is still unclear. But now that superunification energies approaching the Planck mass are being discussed, it seems probable that we are approaching a point where ideas in gravity and high energy physics will have to fuse. Let us hope they will.

—+—

Reader in Physics, Ravenshaw College, Cuttack.

EDUCATING CHILDREN

DR. J. P. DAS

The International Year of the child has come to an end. It has been marked by an unusual display of concern for children, and by much rhetoric. Have we done much to alleviate the sufferings of children ? Particularly for India, three problems have assumed significance : the problem of malnutrition, of child-labour, and of education. I shall discuss education, something that we can monitor ourselves without much monetary investment and with little dependence on Government bureaucracy.

Of all mammals, the human being has the longest childhood. The long childhood of man must have a purpose, a teleology determined by nature if not by the supernatural forces. During this period the child learns, some of the learning is spontaneous, acquired through the daily experiences of the child, his or her interaction with the physical environment and the social environment. The child looks, listens and manipulates, enters into verbal discourse with other children and with adults, models some of them and develops his own individual pattern of behaviour. But much is also learnt through instruction, through deliberate and direct teaching.

It is difficult to separate the effect of learning from that of maturation. The later is hardly biophysical, and particularly so in humans. A child will not develop to discriminate between a trapezium and a parallelogram automatically, or for that matter between a classical and a modern raga. Such discrimination are developed by directed experience, by exposure to these situations with some guidance. A child acquires language, but the acquisitions is accelerated by teaching. Some concepts are spontaneously acquired by the experience of the child, but a great deal is learnt by schooling. Infact, common concepts are better understood by reading about them in books, and by listening to authorities in that field. In traditional societies, traditional concepts of religion are obviously learnt, in all its complexities through teaching. The concept of freedom, nirvana, of love and devotion, of the necessity of self-surrender are some of the examples. Similarly contemporary concepts such as the difference between democracy and capitalism, supply and demand, and dimensions and cues in discrimination are taught. In any case, we are aware of the need to teach children. But what should we teach ? What is the effect of education on the intellectual development of the child ?

Let us compare an illiterate person with a literate one. Mind that both should be from the same economic class, say from the lower middle class. And both are about the same age. The educated person has gone through an adult education programme for 2 to 3 years, while the uneducated person has not. We give both of them a task of reasoning :

> Where it is hot and sandy camels will thrive.
>
> Rajasthan is hot & sandy
>
> Will Camels thrive in Rajasthan ?

The educated person will say that although he has not been to Rajasthan, if what I say is true (that Camels thrive in hot and sandy places) then camels will live well in Rajasthan. The uneducated will say something to the effect that he or she only knows about cattle and since he has not been to Rajasthan, what could he say about Camels ? An uneducated man does not go beyond his experience. An educated man can deal with knowledge that he has not experienced. He typically learnt about events or objects which he has not seen, touched or manipulated.

Not that children who are being schooled enjoy learning about things which they have not or cannot experience. My little daughter came back from school one day and complained that they were teaching her ancient history. Infact, about ancient Roman civilization "why should I be interested in Romans ?" she asked, "when the peple in Rome no longer live and work like the Romans?" The other day, a group of small kids were playing with frogs in the school-field just before there class in Science; they wished to know more about frogs then and there. But their Science teacher had planned to teach them about cockroaches following the syllabus.

Nevertheless, children learn to classify, abstract, generalize and reason from syllogisms. They learn about valleys and islands, about continents and oceans, and about things that are imaginary such as the longitudes and the latitudes. Because they have non-experienticol knowledge, they can deal with the concepts in humanities, science and technology. A child grows up going through school; he learns of simultaneous equations, the election procedure for the President of India, or about atoms and how these can be smashed. Our knowledge will be severely restricted if we had to experience what we know.

Education takes knowledge away from the realm of experience. But then, it should relate to experience, If a child only learns about things that do not matter, the knowledge will soon be useless. If we teach the child always in the abstract, never making teaching relevant to life, soon the child will lose interest not only in what he or she is learning but in knowledge itself. Bookish learning is frowned upon, and rightly so. Certain kinds of knowledge can be made relevant right away and the relevance of others can be worked out. As Bruner, a well-known American Educationist has written, skills learnt should be relevant, but there is a skill to make what we teach relevant. Children have a good fund of imagination and they are naturally curious,

My 18 month old nephew is always getting into things. His one great passion is ball-point pens. He would open the cap and try to put it back endlessly. A 30 month old niece loves to sing and makes up songs for common events which otherwise are drab and ordinary. Both of them play make-believe games.

Children are also eager to learn; they do not need obvious rewards for learning. When my daughter was young, about 6 years old she would often ask me to give her problems in arithmetic; she solved them rather fast and enjoyed the 'game'. One day, when we were at supper, her mother was coaxing her to finish her desert, a sweet pudding that I am particularly fond of. She asked her mother if she can play the game of mental arithmetic as a reward for finishing the pudding.

Something happens to these eager learners and curious individuals as they go through the school years. Something changes; the change comes over slowly like a chronic disease; they become disintrested learners and in different adults. Even some of us who have beaten the examiners in their own game, outguessed them and have learnt to play tricks, thereby coming out successfully in the examinations, some of us have been turned off by the school experience. We seldom sit down to learn something for pleasure. The joy of learning has passed away, it would appear, for ever. Curiosity has given place to monumental boredom. We have lost much faith in the value of books, being taken up by the price of reading one.

What has gone wrong? No one can give a complete answer but a few may be suggested. The child's intellect matures in predictable stages. A child below the age of two does not comprehend language well, before the age of five you can ask him to do, to give you a positive response. "Bring me the ball". The child brings the ball. But ask him to stop playing with the ball, or to refrain from messing up your books; an average four year old will have difficulty in controlling his behaviour through your speech. Before the age of seven, most children do not write words or sentences properly, and only by the age of 12 can they understand abstract concepts and general principles fully. A 10 year old does not understand the principle of finding the area of a rectangle, he gets it by heart. A 9 year old cannot understand the principles of Panchayat system. Thus there is a mismatch between maturation and learning. Our neighbour's children who are 9 years old simply do not understand the institution of administration, but they are taught and expected to remember the functions of a district magistrate. Gradually they switch off their power to think and switch on the mechanism of memorizing without understanding. Because of such experience many children cease to think, as a habit. No wonder, in colleges and Universities we find them, examples of ignorant men and women who know how to get through an examination·

We are also not honest with our children. We seldom teach them things as they are consistently we tell them how they should be. We still extol the virtues of truthfulness and piety in text books while all around us the opposite situation prevails. Poets are praised as greatmen whereas they may starve in reality. The world of our· text books are full of inaccuracies if not outright lies about society and about interpersonal relationships. Even as teachers, we seldom are honest. "I have made an honest mistake". How many teachers have you heard who will admit it.? Not only are we not honest in the class room. but we teach them using fear, by making the children afraid. In spite of the widely known fact that real learning does not occur under fear, that only mindless habits can be fostered when the learner is punished, we continue to use the rod and spare the child; at the cost of doing away with the desire to learn, we teach by making the child afraid. Punishment at home and school often makes a child aggressive, and he or she dishes out the same violence when he or she is a teacher or a parent. As a result of international year of the Child, can we hope that our children will meet a better fate?

Professor. Educational Psychology
and Director, Institute of Mental
Retardation, University of Alberta,
Edmonton, CANADA

"Education does not mean teaching people what they do not know. It means teaching them to behave as they do not behave. It is not teaching the youth the shapes of letters and the trick of numbers and then leaving them to turn their arithmetic to roguery and their literature to lust· It means on the contrary, training them into the perfect exercise and kingly continence of their bodies and souls. It is a painful, continual and difficult work to be done by kindness, by watching by warning, by precept and by prarse but above all by example".

(—John Ruskin).

FACING THE FACTS ABOUT CHILDREN

* One out of every five children dies before its fifth birth day
* Over 810 million infants and children are growing up in remote rural areas where infant mortality, illiteracy and child mal-nutrition rates are very high and few basic services if any exist to help them.
* About 85 per cent of all rural children do not have access to an adequate supply of safe water.
* Of the over 100 million babies born every year in developing countries, 7 out of every 10 are born without any trained help.
* More than 200 million infants and children suffer from various forms of malnutrition.
* Health services only reach one out of every 20 children in the developing countries.
* Over 100,000 children go blind each year due to severe vitamin ‘A’ deficiency.
* At least 100 million children in developing countries aged 7 to 10 are educationally deprived not learning how to read, write or work with numbers. Forty per cent of those who enrol in schools relapse into illiteracy in a few years.

RANDOM RAMBLING (2)

SHRI R. C. SEKHAR

"Believe Each Day To Have Dawned As Your Last"

—*HORACE*

Ab initio the suggestion is revolting: Why should we after all believe this day to be our last ? The mental state prescribed by this utterance of the Great Roman is dangerously akin to that of a criminal awaiting in a restless night his hanging by dawn. It also resembles the attitude of a dashing desperado who never looks before he leaps into fire. We all live in hopes and hence hope to live. Unless there is some sort of a guarantee for a tomorrow, there doesn't seem to be any sense in living for today. The Last Day psychology borders on despair and any conduct under this spell is likely to be irresponsible. Tomorrow and tomorrow and tomorrow till the end of Time is a glorious hope to live in. We are and love to be futuristic. Let us therefore convently skip over this Horatian wisdom and plunge into our projects as usual. Hope is beautiful. The dream of a tomorrow is sweet; and dear Horace could, after all, be talking nonsense !

But before dismissing him as a mere babbler, the problem deserves a second look. Presuming that an endless stretch of time awaits us with countless possiblities, don't we tend to live more and more for the unborn tomorrows and skip over the todays which alone could be really and fully lived. Being creatures of the mind we live among the jostling crowds of phantoms of yesterdays and tomorrows either regretting over the past that is dead or dreaming of the future that is yet to be born. While looking at the stars of opportunities we trample the real gems lying at our feet. The values of a futurist are necessarily inferential and substantially different from the real and the existential. So, after all Horace may be talking some sense.

The concept of eternity is incompatible with a perishable body of skin and bones. We therefore identify ourselves with some residual essence which survives the physical death. This germinal concept of an immortal soul is responsible for all the relevance of history and our futuristic plan. It is still a matter of unverifiable faith, but is the bedrock of almost all the religions of the world. Some stopped at this point and were happy with immortality of the soul. For them therefore life on this earth is a rare and singular opportunity never to be repeated. Eternity may be a spiritual promise but life rests on passing moments of time which are not to be trifled with. Value of time tends to out-weigh the great immeasurabie promise. It is not surprisining to find them rushing about to make the best of this life and the opportunities it holds out.

There are others who go a step further and declare that the immortal soul keeps returning to physical frames eternally. A body is a mere garment to be discarded at will for another. By this device the perishable is made co-extensive with the eternal. A very fine mental preparation for those who want fo take life easy and relax without any risk. If one believes that he can take the hundredth chance why need he bother to make haste ?

If the sense of urgency is somehow removed from life, indolence gets sanctified by a philosophical support and opportunities are frittered away; posibilities are not fully explored. As a result man remains content with much less than what he could have been. To counteract this tendency of a criminal and irrational wastage of life and time the ancient Bard raises a finger of caution. Once I believe that this is the last day for me on this earth and once I can rationally get over the sense of frustration, I may count every passing moment with care and respect and try to load every rift with ore ; Instead of driving me to a mad rush of a irresponsibility, it will make me doubly and anxiously responsible. That way probably every one will try to settle his account by the end of this very day ready to depart without regrets. Hoping is postponing. This alone is responsible for the immense backlog against which humanity is still found struggling. If only everyone could complete his task at the end of every single day ! Horace talks great sense, sir; he talks wisdom !!

Regional Flat
Unit-IX, Bhubaneswar

ORISSA ALUMINIUM PRODUCTS FOR INTERNATIONAL TRADE FAIR

Aluminium door and window fittings produced by a small scale unit of Orissa have been selected by the National Small Industries Corporation for display at the International Trade Fair scheduled to be held in Burmingham in United Kingdom in March 1980.

The Unit, Messers Orissa Aluminium Products, set up in the Industrial Estate, Cuttack has registered a record annual turnover of Rs. 25 lakhs during 1978-79 as against Rs. 11 lakhs during 1977-78. Patronised by the Orissa Small Industries Corporation, the unit with a capital investment of Rs. 10 lakhs, presently employs 150 workers. It produces quality door and window aluminium fittings of I. S. I. specification. Out of total production worth Rs. 25 lakhs, Government agencies purchased goods worth Rs. 15 lakhs and private parties Rs. 10 lakhs during 1978-79.

POLICE AND THE YOUNG OFFENDERS

SHRI B. R. DAS

A national plan of action with health, nutrition, education and welfare including rehabilitation and security schemes as its major segments to reach the deprived child, has been formally launched on the New Year's Day 1979 to mark the ushering in of the International Year of the Child. The general theme of the past year in this country was "reaching deprived child." The national slogan chosen for the year 1979 was 'Happy child nations' pride'. The relevance of the programme to national life, is understood by the fact that 42 per cent of population consists of children aged upto 14 years. According to the last census, they number 230 million. The Government have already initiated action on setting up a National Children Fund, State Children Fund and adopting a strategy for child welfare and special programmes to look after handicapped and destitute children.

According to Gabriela Mistral "Many of the things we need, can wait. But the child cannot. Right now, is the time, his bones are being formed, his blood is being made and his senses are being developed. To him, we cannot answer "To-morrow. His name is To-day". These facts cry out for a change in the priorities of our development plans. What is yet to be realised, is that investment on the needs of deprived children, is an investment in the development of human resources and their productive potential.

As the children are important national assets it is not enough to leave them to parents only to decide as to how best to bring them up. Child requires special safeguards and care including appropriate legal protection. The United Nations' General Assembly adopted the Declaration of the Rights of child, even as early as November, 20, 1959. In passing United Nations' resolution India had played an important role. During the year 1974, India adopted a national policy for children, which among other things, included the Integrated Child Development Programme and Child Rehabilitation and Child Care. The national policy requires the States to provide legislative and administrative support to achieve the goals of national policy for children.

Incidence of crime during the year 1963—73 in the country has shot up from 144 to 188 per one lakh of population. 144 being the lowest figure in 1963 while 188 was the highest figure in 1973. During this decade the percentage increase was 30·7 per lakh of population. Out of population of 57 crores, 14 lakhs of offenders were apprehended. Thus; 188 offenders were brought to book out of every one lakh persons. The decade 1963—73 saw a rising trend in the volume of juvenile delinquency from 3·6 in 1963 to 6·4 per lakh of population in 1973. Of the 36,469 crimes committed by young offenders, 20, 905 or 57 per cent of the total crimes pertain to theft and burglary; 9·7 per cent riots and 2 per cent murders. It is, evident, therefore, that the largest number of offences committed by juveniles are against property and much less against person. In 1973 a total of 63,839 juvenile offences were committed under local and Special Acts. Of these 23 per cent were under Gambling Act, 32 per cent under Prohibition Act, 5 per cent under Excise Act and a little over 2 per cent under Arms Act and the remainder und r such Acts as Suppression of Immoral Traffic Act and other Acts. Over 1,27,000 youthful offenders were apprehended during 1973. Of these 43 per cent were arrested for committing oftences under Indian Penal Code while 57 per cent were held for offences under local and special laws.

So far as the age composition of juvenile delinqents is concerned, they have been divided into three categories viz., 7-12 12—16 and 17—21. The age between 16 to 21 is responsible for more than 60 per cent of all juvenile delinquencies. The analysis of educational status of juvenile delinquents in 1973 revealed that 48 per cent were totally illiterate. In 1972 53 per cent were completely illiterate. This indicates that there was an increase in. juvenile delinquency among the illiterates.

Considering the magnitude of the problem, due emphasis should be laid on providing protection, treatment, rehabilitation, preventing exploitation, proper implementation of Children Act that need to be enacted in the State, including setting up Remand/Reception Homes, Juvenile Home, Juvenile Court and Juvenile Bureaux, etc. The agencies that are engaged in the prevention of Juvenile delinquency are (a) family, (b) school, (c) playground and clubs, (d) game and job opportunities, (e) non-Governmental youth organisations, (f) government organisations. Besides, there is a need for formulation of a social policy and co-ordinated aids of social development, planning, assuring physical and social security in these children who have shown signs of waywardness or have dropped out of schools.

Many centuries ago Socrates bemoaned the juvenile aberrations of his day "Children now love luxury, they have bad manners, contempt for authority, etc. They condradict their parents, chatter before company, gobble up dainties at the table, cross their legs and terrorise their, teachers". These laws have a peculiar modern ring and have become with some modifications a constant refrain in many households.

In our country, the age of criminal responsibility was fixed for more than a century ago at twelve. According to Indian Penal Code, nothing is an offence if committed by a child of 7 years of the age between 7 to 12, if he does not possess requisite degree of maturity of mind. Legally, a criminal act of a child above 7 to 12 years of age constitutes delinquency. Juvenile delinquency itself has been determined in relation to infractions of law and not by the degree of an adult's disapproval of a particular type of behaviour. The fact that juvenile delinquency is more commonly come across in urban areas should not mislead us to the conclusion that it is essentially an urban phenomenon. Most of the children involved have rural roots. Hence, there is a need for providing facilities to quell rural juvenile delinquency, like starting of clubs, playgrounds and picture halls, etc.

Todays' child is the tomorrow's citizen, as Wordsworth would put it "Child is the father of the man". The basic needs of the child are education, clothes and minimum food. Besides providing these basic needs it has to be ensured that is tenderly handled so that he has no psychological compulsion to go beyond norms of accepted behaviour of the community.

The Indian Constitution grants certain rights to the children with a view to promoting their welfare. Article 24 of fundamental rights, is a point in instance. This article prohibits employment of a child below 14 years of age in factories, mines or in other places of hazards.

Sadly, child labour has become an accepted part of Indian life perhaps due to economic compulsions. They toil in actories, cottage industries, fire works factories and so forth, taking risks to their tender lives. While Sweeden has already brought out a legislation to curb corporal punishment for children. We in India are still thinking on the subject. The use of cane to following the dictum 'spare the rod, spoil the child' is indefengible in modern time. Laws, Charters need to be recast for the protection of the child to prevent them from blatant exploitation and cruel treatment. The rough and rugged children reared up in hard lonely world, denied of love and affection are to be protected with loving care by the various agencies of criminal justice system.

We may take an example of the work that is being done by Dutch Police with regard to handling of young offenders: it is twofold viz. the organisation is to be sufficiently strengthened to handle juvenile criminal cases, secondly its tasks are to trace out run-away juveniles and dealing with minor social problems. The handling of the cases of juveniles are being done by the Special Squad that has been formed in the State so that a child is understood from sociological point of view and rehabilitation efforts are made to return him to the society. Besides the parents and the teachers, Police is the agency which comes in contact with the deprived, the destitutes, the run-away and the drop-out children. Hence, there is a need for having counselling officers at the Police Station level to meet such situations which need deft and skilful handling. He could extend all possible help to enable the child to distinguish good from bad with a view to reforming him. It has to be seen that good things started in the International Year of the Child are pursued with vigour, periodical review and revisions are done in respect of laws relating to the child executive agencies and correctional services are strengthened; and a sound approach towards the teeming millions of the youngsters those who look forward to better tomorrows is evolved.

A. I.-G. of Police, Cuttack.

COMMITTEE TO STUDY THE MODALITY OF WATER RATE ADMINISTRATION CONSTITUTED

The State Government have constituted a five-member committee to be known as "the committee to study the modality of water rate administration" with the member of Board of Revenue as Chairman. The other members of the committee are Secretaries of Revenue Department, Irrigation & Power Department, C. D. & S. W. Department and Rural Development Department. The Secretary, Board of Revenue will act as the Convenor of the Committee.

This committee will study the modality of future water rate administration and furnish its recommendation within three months. For the time being, the committee will work as sub-committee of the standing Inter Departmental Water Rate Review Board.

In view of a proposal to entrust the work of assessment of water rates to the Irrigation & Power Department and Rural Development Department and allow the collection part of the work to remain with the Revenue Department, constitution of such a committee was felt necessary. So long, the Revenue Department was entrusted the work of assessment and collection of water rates.

Female infanticide in Southern Orissa

DR. K. C. JENA

The practice of destroying female children was in vogue in a number of ancient societies. Special mention may be made about the ancient Egyptians and Romans. The practice arose from the belief that sacrifice of such human life might please the Gods and bring greater prosperity on those who lived on the Earth. This was a part of the totemic culture prevalent then. Different Gods desired different offerings and human life, particularly those of girls, seemed to be the most desirable form of offering. The nature and process of female infanticide differed from country to country and from one society to another. In certain countries, the female children used to be thrown into the rivers; this was more popular in civilizations which had grown on the banks of mighty rivers. In certain other cases, the victims were exposed to the merciless natural forces and were killed in the process. In certain other cases, they were exposed to the wild animals.

In Southern Orissa, for a long period, the practice of female infanticide was popular. There were many reasons for this evil custom. Unfortunately, this was not confined only to the aboriginals, there were cases of female infanticide among the higher classes of society also, so much so that even the girls born to the members of the royal families were not free from this scourge. This had become almost a style, a part of the social practice. However, the worst affected were the aboriginals, the people who lived on the top of the Kernadimal Hills, a part of the Eastern Ghats. The Kondhs had many social problems including the practice of Mariha. Mariha was the practice of offering human life for appeasing the Goddess Earth. They also suffered from other social problems like those of slavery and Sutee.

During the 18th century, when the British occupied Orissa, the problem of female infanticide came to the surface. However, the difficulty to meet the problem was many dimensional. In case of Meriha it was rather relatively easier to locate and eradicate. The officers could get reports of Meriha from time to time and punitive measures could be taken. The rescued Merihas could be rehabilitated under different authorities, both Governmental and private. But, in case of female infanticide, it was almost impossible to locate the cases. The parties would contend that the female infants had died due to natural causes or diseases. In the background of the socio-economic and medical conditions of the late 18th century, it was difficult to make any kind of investigations into such cases. Hundreds of girls used to be silently sacrificed in the remote and inaccessible villages of Southern Orissa without making the slightest noise to the external world. Even when, there could be a little information to the authorities, that was only after many days of the actual incident, at a time, when no criminal action could be taken. Major Cambell, one of the ablest officers of the East India Company placed in Southern Orissa had taken the problem of female infanticide very earnestly. His finding led to several conclusions. One of the major findings was that the practice of female infanticide could be stopped not by mere police force, it needed social changes.

The Kondh society had special problems in matrimonial alliances. The bridegroom had to pay a certain amount of bride-money to the father of the bride. Normally, in other societies, it was the father of the bride who used to pay to the bridegroom, but the reverse was the case among the Kondhs. The money received by the father of the bride was spent in merrymaking and feasts. There would be no trouble till now. After some time, the wife might change her mind, and changing mind was very common with the Kondh women. She would change her mind and seek another husband. This was easy and common with them. If a Kondh woman entered into the house of another Kondh man, it was customary, she would be received. If not, it was a disgrace for the whole village and no Kondh, worth his name would welcome disgrace to his village.

Once, the woman decided to go to another husband, the former husband would come to the former father-in-law and ask his bride-money back. Meanwhile, the money must have been lavishly spent and there was no means out. Thus, the father of the woman found himself in great difficulty. He would definitely curse his daughter and definitely wish that such a daughter should not have been born at all. This sentiment would become the basis of the attitude that lay behind the practice of female infanticide. The Kondh had the desire to get rid of his daughters from the childhood itself so that in future there would be no problem of their marriage, bride-money, remarriage and the series of nightmares which would go with it.

The female children were allowed to survive in special cases alone. If they were the first children of the Kondh parents or they born in the family of the head of the Kondh viilages. In these cases, the parents had to take the obvious consequences and bear with the burden.

The trouble of changing husbands had been common in the Kondh families—rather this was a part of the Kondh life which could not be either stopped or even reformed. Had there been no marriage-money paid to the father-in-iaw, then, there could be little worry for the remarriage of the women. Again, the Kondhs had no idea of economic prosperity or savings. Had there been the means of savings and investments, then also the problem could have been minimised. In the absence of these economic opportunities, the Kondh society in the second part of the 18th Century posed a big problem for the administration of the East India Company.

The authorities of the East India Company realised that the problem of the female infanticide had to be seriously tackled. At a later stage, the British authorities did consider this problem at par with the problem of the Meriha. Cambell and his followers realised that in case of Meriha, the problem was rather easy. They had difficulty in stopping of the Meriha but in case of female infanticide, they found that the problem was becoming more complex. They suggested that the problem could be stopped by introducing certain economic measures. They opened a number of weekly markets or Hats where the Kondhs could market their products. There were efforts to minimise the role of the middle-men who used to exploit the innocent Kondhs.

The female children were taken note of. In every Kondh village there used to be a detailed census and special care was taken for the female children. The village officers were instructed to see that the number of female children born in a particular village was not declining without any undue reason. If there was any suspicion, the parents were asked to explain. No doubt, this method was not very effective or direct, but it did create a change in the attitude of the Kondhs towards their daughters. The Adivasis were very sensitive towards Government orders and any interference on behalf of the Government was considered with serious thought. The measures takan by the British authorities might not have borne fruits immediately, but they definitely paved the way for effective measures in course of time.

Meanwhile, the Missionaries had come to Southern Orissa. In the later part of the 18th century and the first part of the 19th century, their contribution to the socio-economic life of Southern Orissa was significant. They entered into the remote areas of this part of the province. They had their mission headquarters at Suruda and opened a number of branches in various villages. With a network of missionaries they preached the gospel which proclaimed the essential equality of all men and women. There was no difference between a male child and a female child and the question of marriage-money and the subsequent problems were brought to the minimum level possible.

With a changing attitude towards the economic problem of the Kondhs and the sweeping changes which came in the Kondh society, the problem of female infanticide could be successfully checked by the second part of the 19th Century. This was a great contribution of the British to the social history of Southern Orissa.

Berhampur University,
Berhampur, Ganjam

THE MONKEY

A rich, greedy man who never gave alms to the poor, had a monkey which he hoped to sell at a higher price than what it had cost him.

One day the man had gone out to do some business and the monkey left alone in the house happened to come across a case full of gold and having opened it, began to throw the contents out of the window.

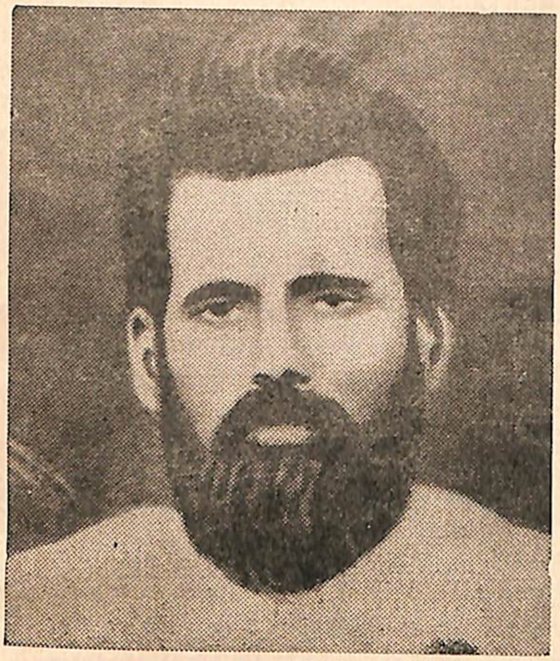
Many passers by, seeing all the riches, began to form a crowd and everyone was doing his best to get as much as he could for himself.

When the case was almost empty the man returned home and realising what had happened flew into a rage.

"That horrible, detestable, stupid animal !" he shouted, but it was not much use as the monkey did not understand him in any case.

But a neighbour said to him : "Keep quiet ! Certainly it is very foolish to throw money out of the window as your monkey did, but it is much wiser than keeping it locked up in a case as you did and make no use of it whatever ".

The miser for another collects
His bag of money ;
The bees laboriously pack,
But others taste the honey.



Pandit Gopabandhu Das and his educational concept

SHRI RAJKISHORE RAY

When Mahatma Gandhi returned to India in about 1914 after his experiment in Satyagraha in African continent, fully armed with the conviction that to serve humanity is to serve God, he found dedicated patriots like Lala Lajpat Rai of Punjab, Bal Gangadhar Tilak of Maharastra, Pandit Madan Mohan Malavya of Uttar Pradesh, Bipin Chandra Pal and Chittaranjan Das of Bengal, Pandit Gopabandhu Das of Orissa, Venkatpaiya and Prakasham of Andhra. Rajgopalchari of Madras, Karnad Sadasiva Rao of Karnatak and a host of others who were determined to free India from the shackles of imperialism which had its shattering effect on the village economy. It was by that time, the National Congress had become a platform to rouse the nation's will for a free liberated India through direct action as and when required.

I do not want to give a detailed account of the life history of this savant. I shall confine myself to a recounting of his revolutionary educational concept which materialised in the establishment of a national school in Sakhigopal in Puri district. He keenly felt that without the spread of Education after the pattern of Gurukul system and without the fervour of culture and Indian heritage ingrained into the system of Education itself the people would not be roused to work for the freedom and initiated into courage, discipline and sacrifice. He believed in the ideal of plain living and high thinking. He visualised a band of students emerging out of the BANA VIDYALAYA who would not be hankering after jobs and certificates and fritter away their energies in petty matters, but would be working for the upliftment of the common people. In this project he was inspired by the work of the Decan Education Society under the leadership of Gopal Krushna Gokhale and wanted to form a Universal Education League. Three stalwarts like Pandit Nilkantha Das, Pandit Godavarisha Mishra and Acharya Harihar who were then students of Calcutta University and were appearing at M. A. examinations, hearing the call of Pandit Gopabandhu decided to further the cause of education as envisaged by him by serving as teachers on mere subsistence allowance. On the suggestion of the devotional poet Madhusudan Rao, a site was selected in the sylvan surroundings of Bakul grove behind the famous temple of Sakhigopal. The middle school was started on the 12th August 1909 with only 19 students.

The following are the aims and ideals of the Universal Education League contemplated by Pandit Gopabandhu.

"It is the belief of the organisers of this league that every one has equal right of being educated. Just as the rays of the sun and moon are shared equally by the people and just as religious instruction is being imparted to the human society in all ages, education or mental illumination should also be given equally to all. There are several ways of reducing educational expenditure without deteriorating educational standards and for this, attempts are being made to establish a grove school on the lines of the old GURUKUL system. In this institution the tuition fee payable by the students shall be the minimum and they will be made to live a simple and austere life in the school hostel. A school does not consist of only buildings, chairs and tables; there must be well educated, sincere and idealistic teachers. The present system of education has failed to prepare the young men of the country for the struggle of life. They are not capable of doing anything other than what can be done with chairs and tables. It is an important problem to teach them appropriate crafts and make them able to earn their livelihood and for this they should be taught not merely physical exercises but also industry and agriculture. There is also a great need for religious and moral instruction, for morality has value even in material activities like trade and commerce.

The Satyabadi school is not a local and communal or sectarian institution in respect of ideals, form and management; its basic ideal is to impart liberal education to the community at large. This is the beginning of a comprehensive educational drive for which we have been preparing for a long time. Our idea is to build up a series of institutions of this type and it is only one of the series. In course of time, schools of this type will raise their heads all over the province. In these institutions there will be union of wealth, education and character and to implement this scheme the Universal Education League has been established".

It was an open air school. Teaching was imparted under the shades of the ever green trees laden with flowers and fruits. Gopabandhu wanted to preach the message of nationalism and moral idealism and train up a generation of patriotic and selfless youngmen who would brave every hardship to free the country from bondage.

As the reputation of the school spread like wild fire, several Chancellors and Vice-chancellors visited the school. Mahatma Gandhi, Sir Deviprasad Sarbadhikari, Dr. Lancaster of Great Britain and Sir Ashutosha Mukherjee, the renowned Vice-Chancellor of the Calcutta University were some of the nobilities who blessed the institution by their august visits.

Mahatma Gandhi wrote in his Young India on the 13th April 1921—

Orissa has workers too. Pandit Gopabandhu Das, an ex-M. L. A., an ex-Pleader and many other things besides is a selfless leader. He and his band, they tell me live on rice and dal. They rarely take ghee now-a-days. After non-co-operation the workers have reduced themselves to the lowest honorarium, even as little as ten rupees per month.

No wonder if I believe that with such earnest men Swaraj is possible of attainment during the year. Pandit Gopabandhu has an open air school at Sakhigopal. It is worthy of visit. I passed a most delightful day in the midst of the boys and their teachers. It is a serious experiment in open air teaching. Some of the boys are powerful atheletes.

The Satyabadi school was a novel ideal in those days. Gopabandhu felt that Indians should sustain their national heritage through establishment of schools on the principle of high thinking and plain living. He felt that and wanted to make education more meaningful by raising the morale of both the teachers and the taught. Students imbibed secularism and shed casteism and superstitions which gripped the average mass of people. Orthodox people who did not see eye to eye with the changes introduced by Gopabandhu in the school burnt it. Undeterred Gopabandhu rebuilt the school.

In response to the appeal of Gandhijee to spread free national education he formed an educational organisation named Utkal Swaraja Sikhya Parisad. In 1921 Gopabandhu converted his favourite institution into a national school. But after some time from 1924 financial difficulties stood in the way of further continuance of the institution as an autonomous one. Reverend C. F. Andrews, Gopabandhu's close friend in relief activities in Orissa wrote a touching letter consoling Gopabandhu—"I know you must have been feeling terrible mental anguish on account of the closure of the Satyabadi School for you have spent the best part of your life for this institution. It would be still greater shock if that school becomes an aided institution. I realise that it is more painful for you to see it as a Government aided institution than to close it down altogether".

Thus ended a glorious chapter in the annals of educational reform in Orissa, a unique experiment that anticipated Rabindranath Tagore's experiment in Shantiniketan, Mahatma Gandhi's concept of Naitalim or Basic education which stood for a cultural, moral and political renaissance.

The students of the Satyabadi School carried the stamp of the school wherever they went. They were known everywhere for their depth of knowledge, spirit of service, idealism, sense of dignity and devotion to motherland. The teachers of Satyabadi school, Pandit Nilakantha, Pandit Godavarish Mishra, Acharya Harihar along with Gopabandhu and Krupasindhu Mishra came to be known as 'Pancha Sakha'.

His definition of Oriya was striking. He gave a new significance to the nature and function of the Utkal Sammilani. He held up the great heritage of Orissa and appealed to Oriyas to rise above all pettiness and engage themselves in a common endeavour irrespective of their social and economical position for the good of the nation. He said "Orissa belongs to those of Bengal or Punjab or Marwar or Madras those Hindus or Muslims, Aryans and Dravidians who have identified themselves with Utkal or Orissa. They are also Oriyas. The objectives of the Sammilani are to develop the Oriya nationality which consists of different categories of people residing in physical Orissa, accepting it as their own province. Not parochialism but humanism was the goal of Oriya nationalism. Oriya nationalism consists of universal love and fullness of life. It is not selfish, lifeless. It is not based on desire for conquest or bloodshed. Equality, fraternity and liberty are its watchwords. Orissa does not suffer from pettiness. Orissa's river is called the Mahanadi or the great river. Orissa's sea is Mahodadhi or the great ocean. Orissa's hill is Mahendra or the great mountain. Orissa's tree is Kalpabata or the tree of fulfilment. Orissa's Lord is Jagannath or the lord of the Universe and Orissa's cremation ground is the Swargadwar or the gate to heaven. The Oriya visualises greatness all around. There can be no discrimination between great and small in a national movement. In the national endeavour there is no difference between a Maharaja and sweeper.

He concluded with the following lines :

Do or die should be our motto. Many may have to lay their lives to achieve this difficult goal. Individual sacrifices strengthen a nation. This is the way of the realisation of the self. Let there be no fear and frustration. This is the command of the mother Utkal. Believe me if Oriya has lived so far through the vicissitudes of history, it is not meaningless. The great seers and sages of India have come to this holy land Utkal in quest of knowledge. Without meditation and dedication no important work has ever been done. The salvation of life lies in such dedication.

The two most outstanding books of poetry that Gopabandhu wrote were "Bandira Atma Katha" which was written while he was in the prison and "Dharmapada". These reflect the agony of a sensitive soul which cried out in distress at the all pervading human misery and the thraldom of the human spirit under foreign rule that it came across.

'Chintan Chakra'
Balagandi, Puri

ORISSA HANDICRAFTS EXHIBITION ATTRACTS BIG CROWD

The Orissa Handicrafts Exhibition, first of its kind to be organised in the State has been a big success judging from the volume of business transacted and the enthusiasm shown by the public in visiting the exhibition in large numbers.

The week-long handicrafts exhibition organised at the State level for the first time in Balijatra grounds of Cuttack since December 8 has attracted a record number of people of over 5 lakhs so far. Handicrafts goods worth over Rs. 3 lakhs had also been sold.

The exhibition which was scheduled to be concluded tomorrow, had been extended by another day on public demand.

The exhibition has focused attention of the public to numerous handicrafts prepared by the talented artists of Orissa in various parts of the State. The handicrafts of each district have been displayed in separate stalls.

Among tne peculiar handicrafts on display in the exhibition are: Paddy crafts of Sambalpur and Keonjhar districts, hand-made toys of Bargarh, walking dolls and Chaiti Ghoda of Ganjam, Miniature stone crafts of Koraput, tribal crafts of different districts. Many such crafts were hither to unknown to the common people.

The Director of Central Cottage Industries Emporium, Government of India along with a team of buyers from Delhi visited the exhibition and have placed orders for selected handicrafts worth over Rs. 2 lakhs. The Emporium is also planning to hold an 'Orissa Exhibition' in Delhi to popularise the handicrafts of Orissa.

The Orissa Handicrafts Co-operative Corporation have placed orders for purchase of handicrafts worth over Rs. 1·50 lakhs from this exhibition.

On the whole, the exhibition has been a big success and is an encouragement for the poor artisans of the State.

Village Belabani : an eye opener

SHRI J. K. JAGADEV

Village Belabani is a very small dot on Nayagarh Subdivisional land scape of human settlement. But even then, it is proud of providing permanent shelter to weaker families who belong to Scheduled Caste community. The village is located little away from Nayagarh on the road side leading towards Odgaon.

Almost all the villagers of this village are bamboo-product makers. It is really a previlege to see them when they are at their traditional work. It is needless to say that the skill they have inherited from their forefathers is superb. This skill is, no doubt, providing them their livelihood. When I had the first opportunity of visiting this village with the Branch Manager, State Bank of India, Nayagarh Branch and his Field Officer, I found these rural artisans beaming with joy. They were intoxicated with joy because the State Bank of India had adopted this village under Integrated Rural Development Programme. This adoption not only helps identifying the needs of the poorest section and rendering financial and technical help to make out a decent living, but also helps these rural artisans to regain their traditional merit and create a lasting symbol of their skill.

Against this back-drop, it may be mentioned here that priority sector financing under Differential Interest Rate has been a long accepted lending programme of the State Bank of India. The concept of conventional Banking has long since been relegated into background. Now has come the time of developmental Banking. In the changed circumstances, the Bank has accepted its social obligations and has started taking active part in the development of the society. Thus has come the concept of priority sector, financing poor village artisans to help them coming out of the vicious circle of "we are poor because we are poor".

The Government have drafted programmes for all out development of the villages, trying to bring the smallest of the units of the family well above the poverty line. Thus has taken birth the Integrated Rural Development Programme to identify the needs of the poorest section and do the needful for upliftment of their economic standard.

With the help of the Extension Officer (Industries), staff of the State Bank of India, Nayagarh Branch identified 33 rural artisans in village Belabani and formulated a scheme for their bamboo-products. The State Bank of India, Nayagarh Branch has financed all the 33 families with a working capital of Rs. 200·00 each for purchase of bamboos. This working capital has been loaned to these families at a rate of interest of 4% per annum. They are to repay this loan in 10 instalments. The most alluring advantage these families are to enjoy out of this is that they are to get a subsidy at a rate of $33\frac{1}{3}\%$.

The sole aim of adopting this village under Integrated Rural Development

Programme in co-ordination with the District Industries Centre, Puri is to extend all out effort to bring these artisans above the poverty line. It is a heartening feature that the State Bank of India, Nayagarh Branch commits to render all possible financial and technical assistance to these villagers.

It is hoped that these artisans will now march ahead with a confidence to bring a lasting glory to their village in whose lap they had been in a slumber. The State Bank of India, Nayagarh Branch has opened their eyes and in turn it is hoped that the village Belabani will be an eye opener for other villages in Orissa.

Subdivisional Officer
Nayagarh, Puri

PILOT PROJECT FOR SCHEDULED CASTES

The Commissioner for Scheduled Castes and Scheduled Tribes, Shri Sishir Kumar has recommended to Central Government to take up a Pilot Project for rehabilitation of one lakh landless Scheduled Caste families in Orissa.

During his recent tour to the State, he observed that in view of limited resources of the State, it was but proper that Government of India comes to the aid of the State Government to make the programme viable. While discussing with the high officials at Bhubaneswar, the Commissioner said that the programme of rehabilitation of 1 lakh landless Scheduled Castes families may be taken up in the coastal districts of Orissa. The Plan envisages to fold programmes. Firstly each landless family would be vested with usurfruct rights two 100 coconut-bearing trees planted on 10,000 Kms. of Canal Embankments. The second programme envisages allotment of one hectare of sandy Government waste or surplus ceiling land which could be used for planting coconut seedlings and till they bore fruit, intercropping of crops like pine apple and guava, etc., could be taken up. In both these schemes, 100 fruit-bearing coconut plants will be allotted to the beneficiaries on a nominal fee for enjoying usurfruct rights. The whole programme envisages growing of 35 lakh coconut trees over a period of 5-6 years requiring an investment of about Rs. 35 crores. The Commissioner felt that a financially weaker State like Orissa could hardly afford to take up the scheme by itself in the middle of the 6th Five-Year Plan period without adequate central assistance.

The Commissioner visited the Coconut Research Farm at Sakhigopal, the Coconut Pilot Project at Konark and some Forest Department schemes implemented to control the vagaries of sea erosion beside the Mico Project for Juangs and I. T. D. A. in Keonjhar.

Central Inland Fisheries Research Sub-station, Cuttack

SHRI ASHOK PRASAD BOSE

The Central Inland Fisheries Research Sub-station of the Central Inland Fisheries Research Institute, Barrackpore was first established in Cuttack, Orissa at the request of the State Fisheries Department in 1949. It is engaged in applied research on different aspects of fresh water fish farming. The outstanding achievements of the sub-station are as follows.

Reasons causing fish fry mortality were identified through investigations and methods evolved which greatly reduced fry mortality and ensured high productions of this basic material for aquaculture. Production as high as over 66 lakhs, major carp fry/hectare in a period of about 2 weeks has been recently achieved making fish fry trade commercially highly attractive.

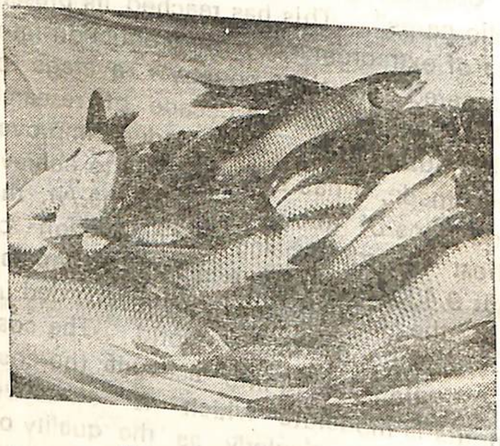
The presence of predatory fish and other enemies of cultivated carps make it desirable that instead of the small fry larger sized stocking material that is fingerlings be liberated for raising marketable fish in fish culture. Techniques of raising fingerlings in rearing ponds have therefore been developed and it has been possible to record a production as high as over 3,000 kgs. of fingerlings of major carps per ha. in 3 months, the number being in excess of 1·75 lakhs/hactare.

Epoch-making strides have been made in the field of production of marketable fish in fresh water ponds. The methodology evolved has come to be widely known as "Composite culture of indigenous and exotic carps". This has reached its present state of extraordinarily high production rates (compared to the country's average of 600 kg./ha./yr.) after a decade of research at this Sub-station. With gradual improvements made, it has been possible to achieve productions of about 8,000 kg./ha./yr. the highest recorded being a production of about 9,400 kg./ha./yr, which are comparable to the highest production recorded in still-water ponds in the world. The cost of production, taking into account the cost of inputs is moderate which is attractive commercially particularly as the quality of the fish in terms of weight (average over 1 kg.) and condition is such that it could command high prices in the market. With this, fresh water aquaculture can be considered to have come of age in India and this breakthrough has brought fish farming at the take-off stage and made it feasible to be undertaken as a profitable industry.

This technology, developed by the Sub-station is being tried by the All-India Co-ordinated Project on Composite Fish Culture and fish seed production in several States under different agro-climatic conditions, and excellent results have been obtained. Field demonstrations by this Sub-station, in ponds of a fish farmer under the 'National Demonstration Scheme' of the I. C. A. R. yielded an average production of over 7,500 kg./ha./yr.

Fish Breeding

Development of the method of induced breeding of Indian major carps in confined waters by hypophysation is a great scientific milestone reached for the first time in the sub-continent and is the most important development in the progress of fish culture in India. This technique is the only dependable course of quality fish seed and has revolutionized fish culture. It has also opened a new line of research on selective breeding and hybridization aimed at evolving superior strains of fish for higher production and a number of interspecific and intergeneric hybrids have been produced some of which have shown superior qualities than the parent species.


Fish raised at the Killa farm.

The exotic Chinese silver carp and grass carp imported into India, were bred in still waters for the first time at this sub-station by application of the technique of induced breeding by hypophysation. As in the case of Indian major carps, the technique was successfully applied for large-scale production of seed of the exotic carps also and the latter distributed to various States for culture.

The success in inducing the Indian major carps to breed twice within a period of two months is highly significant in that it opens up the possibility of multiple breeding, prolongation of the breeding period, enhancing fish seed production, domestication, etc.

A carp hatchery complex, which eliminates much of the field hazards and enhances survival of fish seed, has been established at Cuttack.

The technique of preserving pituitary extract in glycerine and ampouling is an important step towards establishment of 'pituitary bank' to serve as a readily available source of 'injection material'. About 900 ampoules were distributed to State Fishery Departments, Agriculture Universities and private pisciculturists.

Induced breeding of the mullets *Mugil cephalus* and *Liza troschelli* was first accomplished in 1962 by this sub-station. The successful rearing of hatchlings has recently been achieved.

Weed Control

The discovery at the sub-station of the efficacy of ammonia as a weedicide against aquatic weeds, has a great significance, in view of its beneficial side effects in the fish pond environment and the non-cumulative and transient nature of its toxicity.

A method and technique of using 2, 4-D in precise minimum doses on water hyacinth reveals the vast possibilities of control of this abnoxious floating weed in culturable waters.

Suitable methods for control of algal blooms have been evolved.

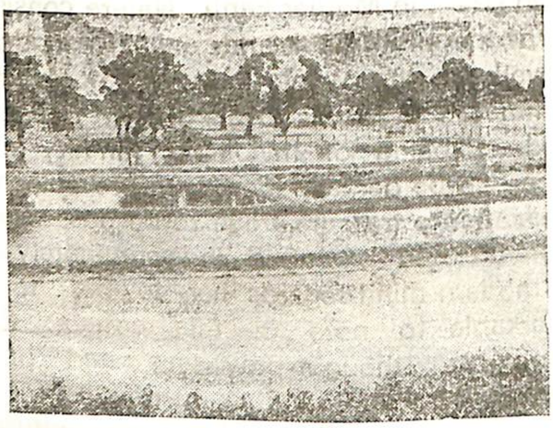
A battery of hatching haps at the fish farm, Cuttack.

Pond Fertilization

Suitable fertiliser combinations for use in different types of soils have been evolved. Urea has been found to be an efficient fertilizer in fish ponds for quick production of zooplankton, the favoured fish food organism.

Making available the know-how

The technical know-how developed by the Cuttack Sub-station through years of research is made available to agencies like State Frsheries Departments, Government undertakings, etc. and also to Trainees (including foreigners) and fish farmers through Seminars. Workshops, Training and Refreshers Course, lectures, Talks and Demonstrations, etc.



A view of the experimented fish firm of the Cuttack Sub-Station at Killa Cuttack.

Much of to-day's fresh water aquaculture development in the country is linked directly or indirectly to help, advice and assistance rendered by the Cuttack Sub-station of the Central Inland Fisheries Research Institute.

Central Inland Fisheries Research Institute is under the Indian Council of Agricultural Rasearch, New Deihi. This year the Golden Jubilee of the I.C.A.R. is being celebrated. Under this, transfer of fish farming technologies from the laboratory to the field is in progress. The technologies developed by research at the Cuttack Sub-station are being demonstrated to fish farming families in rural areas of Orissa. The centres where the technologies are being demonstrated are Raghunathpur under Jagatsinghpur Subdivison and Satyabhamapur, Tangi and Ayatpur under Cuttack Sadar Subdivison. Some technologies are also to be demonstrated in the Departmental Fish Farm at Killa, Cuttack. The technologiess which are being demonstrated are the following:—

1. Induced breeding of Indian major carps.
2. Induced breeding of Chinese carps
3. Controlled breeding of common carp
4. Hatchery for carp eggs
5. Transport of fresh water fish seed
6. Management of carp nursery
7. Management of carp rearing pond
8. Mixed culture of Indian major carps
9. Composite fish culture
10. Control of noxious aquatic weeds
11. Paddy-*cum*-fish culture
12. Raising of common carp fingerlings in paddy fields.
13. Prevention and control of common fish diseases.

The fish farming families are being involved in the work so that they acquire first-hand knowledge of the farming practices. Under the 'Lab to Land Programme', Fish Farmers' Days Exhibitions, radio talks and screening of films are intended for dissemination of information towards development of fish farming.

Journalist," Samachar Bharati"
"Binode Bhavan"
Bhashakosh Lane
Cuttack-753002

Environmental pollution in our time: Its magnitude, dimensions and effects

SHRI RAJENDRA PRASAD ACHARYA

The current ecological blight which looms so large and so menacingly in the mental horizon of the modern man, like the legendary Sword of Damocles as it were, is mainly the result of environmental pollution in our times. Environmental pollution is so pervasive, deep-seated and long-standing in the entire eco-system of our planet so multifarious in its facets and dimensions, so infinite in its magnitude and complexity and so much fraught with its baneful effects and appaling consequences on the life and destiny of all, that the problem as such defies precise description or easy and immediate solution. It poses a grave threat to the entire terrestrial ecological system, exposing to grave peril not only the life and health, the security and survival of the plant and animal kingdom as well.

Environmental pollution which is the outcome of the perversion and contamination of the entire terrestrial ecological order consisting of the natural physical habitat of the biological species as well as the atmosphere and hydrosphere surrounding it constitutes the most fundamental and crucial aspect of the ecological dilemma of our times. In one of his profound and penetrating articles entitled "Genesis of Pollution" Dr. Arnold Toynbee attributed the origin of pollution to the extinction in rationalistic modern mind of the religious vision of Nature as cherished by the men of classical antiquity who contemplated Nature as a veritable living Goddess—the Mother Earth. Nature consisting of the entire plant and animal kingdom as well as the whole natural forces and inanimate things was to the ancient classical mind—a being of inviolable sanctity and grace—to be deified, adored and reverenced rather than a treasure-trove to be possessed, mastered and exploited indiscriminately as the modern mind regards her to be. It is remarkable to note in this context the memorable, thought-provoking and profoundly illuminating statement of the tribal chieftain of the Red Indian Community of Seattle, made in reply to U. S. President Franklin Pierce's offer in 1854 for purchase of large tract of Indian land. This statement which underscores the all-embracing unity and organic interrelationship and interdependence of all things on our planet and unmistakably reflect the ancient and traditional view of the profound importance and value of the environment to humanity and life as well as of the paramount need for maintaining its harmony and sanctity runs as follows : "This we know : the earth. This we Know. All things are connected like the blood which unites one family. All things are connected. Whatever befalls the earth, befalls the sons of the earth. Man did not weave the web of life : he is merely a strand in it. Whatever he does to the web, he does to himself.

Even the white man, whose God walks and talks with him as friend to friend, cannot be exempt from the common destiny. We may be brothers after all. We shall see one thing we know, which the whiteman may one day discover—our God is the same God. You may think now that you own Him as you wish to own our land; but you cannot. He is the God of man, and His compassion is equal for the red man and the white. This earth is precious to Him, and to harm the earth is to heap contempt on its Creator. The white too shall pass; perhaps sooner than all other tribes. Contaminate your bed, and you will one night suffocate in your own waste".

Thus the basic assumption of the materialistic and utilitarian-minded modern man that he is the undisputed lord and master of Nature and so can use or abuse her according to his own sweet will is at the root of an ecological crisis. And this crisis is further intensified and aggravated by the lamentable lack in most of the modern minds of sound ecological vision and prespective—a fundamental awareness and understanding of the delicate and precarious balance maintained in Nature amongst things in their mutual interrelationship—a slight disturbance of which cannot but put the life, security and physical well-being of her creatures in dire peril.

Environmental pollution is rampant and has assumed appalling proportions in big cities and modern metropolises and exists on a lesser scale elsewhere. New York city for instance discharges 200 million gallons of raw sewage into the Hudson River daily. Each square mile of Manhattan produces 375,000 pounds of waste every day. When the waste is burnt thirty per cent of the residue glides in the air as ash until it settles on the citizens. One of the principal and most prolific sources of environmental pollution in modern life is fuel consumption in various forms. While chimneys belch sulpher dioxide, motor vehicles add carbon monoxide and other highly poisonous gasses. Just as immense proliferation of people has led to population explosion similarly there has been an explosion in the automobile population in highly industrialized countries like U. S. A. with its attendant impact in causing atmospheric contamination. Car-exhaust fumes containing deadly elements like tetraethyl lea seriously affect human nervous system, increase irritability and hampers normal brain function. Health officials are deeply worried and embarrassed about the dengerous air pollution associated with the burning of coal.

Far more embarrassing to scientists who study the earthi's heat balance is the build-up in the earth's atmosphare of carbon dioxide, a product of all fossil fuel combustion. Adding carbon dioxide to the atmosphere raises the earth's temperature by retarding the radiation of heat into space—a phenomenon known as the 'greenhouse effect'. A 1977 study of the U. S. National Academy of Sciences Projects a four-to-eightfold rise in atmospheric carbon dioxide in the next two centuries if dependence on fossil fuels particularly coal continues on the present scale. The resultant global increase in atmospheric temperature would have grave-nay even catastrophic impact on climate, weather patterns, rainfall, ocean levels, agriculture and have other disastrous consequences that are unforessable and unpredicable at present.

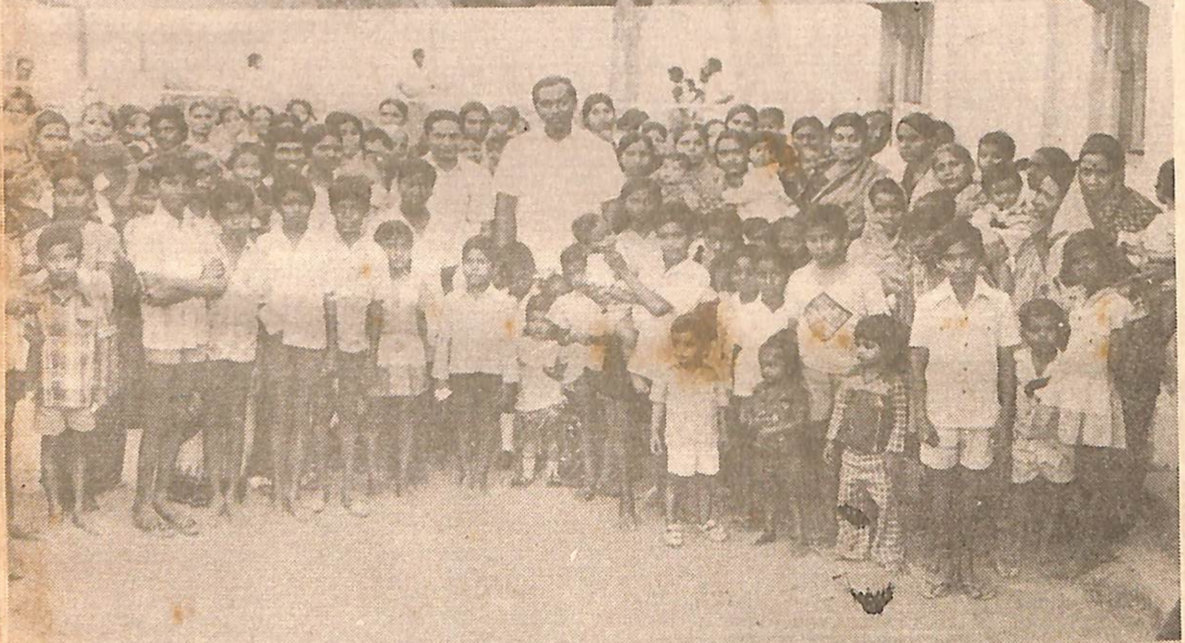
Nuclear plants also pose a serious environmental hazard. The recent nuclear disaster (perhaps by far the worst in U. S. nuclear industry) in the nuclear reactor at Harrisburg in Pennsylvania in the three miles island has awakened the public mind in America as well as in the whole world to the potent radiation hazard of the proliferating nuclear industry. Atomic power plants release not only radio active waste which must be buried but also extremely hot water that has to be disposed of somewhere since it would involve a serious menace to marine life. Radio isotopes also emit radiation and pose grave threat to the environmental equilibrium. Production of nuclear weapons and other devices, conduct of underground nuclear tests and explosions have introduced into the sea such lethal radioactive waste as Strontium-90 and Caesium-137. Many of our rivers are heavily polluted with chemical waste from industrial complexes and sewage from town drains, thus involving a serious threat to the life and security, healh and happiness of equatic plants and organisms. Besides, seas have been equally invaded by pollution. About 5,000 tonnes of mercury—an element highly injurious to life are estimated to enter the ocean as a reasult of discharge of industrial waste into the rivers and atmosphere. Release of industrial wastes in major industrialized countries poses such potent environmental hazards that Government have to take stringent deterrent measures against it. The U. S. Environmental Protection Agency (E. P. A.) on January 19th, 1977 ordered the ban of direct discharge of Polychlorinated biphenyl (P. C. B.) a highly toxic industrial chemical into the U. S. waters. This has been considered imperative because PCB's are regarded as one of the gravest of many environmental contamination problems, and scientific studies have shown that deformities in foetuses, changes in liver function, nervous ailments and cancers in animals are caused by PCB's.

Due to environmental pollution air and water which constitute two most vital and indispensable necessities for all biological existence are not available in pure and uncontaminated form in the contemporary day-to-day life. Modern man has neither pure and fresh air to breath, nor fresh and clean water to drink. The air inhaled by us is contaminated by dust and fumes emitted by automobiles and chimneys of factories, by the stinking smell of sewage in the drain or nightsoil on the roadside, the garbage heap littered on the road or radioactive waste diffused through the air. Intake of impure air into the respiratory system adversely effects the health of man, animal and also the vegetation. Pure drinking water is pretty rare in our daily life. Very few modern cities in India enjoy the facilities of pure drinking water. Because most of the tanks and rivers of our country which supply us drinking water are often dirty and some of them are also highly polluted due to release of effluents from factories. By drinking foul water from the rivers people contract epidemics like cholera, typhoid and amoebic dysentery. In Rajasthan crippled babies were born because their parents had to drink impure water.

The current ecological blight which is largely caused by environmental pollution poses a pretty serious and delicate problem, exposing contemporary life to dire peril and formidable challange. The problem as such can hardly respond to piecemeal remedy and simplistic solution; what is called for, therefore, is the evolution of a profoundly imaginative and integrated approach, a comprehensive strategy to grapple with the problem in all its multifarious ramifications and intricacies. The only sensible and rational course of action is not to rest quiescent by taking a pessimistic and alarmist view of the situation but to keep the ecological dilemma constantly in view and strive ceaselessly to preserve, protect and promote the environment by ensuring the use of our sophisticated scientific and technological know-how, technique and capability, as well as all tools and equipments in the armoury of science in a rational, sensible and peaceful manner so that the delicate and precarious balance and harmony so judiciously and meticulously built and maintained by Nature, of our terrestrial ecosystem might not be disturbed or destroyed. This is of crucial and paramount importance since the destiny of the entire humanity, present and yet to be, as well as of the entire biological and botanical community is inextricably and inescapably linked with the course of action that we pursue.

C/o Orissa Jagannath Company,
Balubazar, Cuttack-753002.

Children participa
ting in fancy dres
competition held a
Kalahandi o
November 14.



Shri L. Kindo, Colle
tor, Kalahandi visiti
the Children Fair.

A Baby Show w
organised at Kal
handi in connecti
with the celebrati
of IYC.

4
5
Vol. XXXVI No. 6 ORISSA REVIEW Regd. No. O-4

License No C. R. N. P. 5—Licensed to Post without Pre-Payment

an open window

Rourkela has ushered in a whole new world of steel creativity in India.

First, as a major producer of flat steel products like wide and heavy plates, medium and light hot-rolled sheets and strips, cold-rolled sheets and strips, hot dipped and electrolytic tin plates, galvanised sheets and strips, high silicon steel sheets for electrical equipment, etc—it has catered to the different needs and varied requirements of such crucial industries as shipbuilding, automobile, locomotive, fabrication, wagon building, dynamos, transformers, tubes and pipes, domestic appliances, agricultural implements, defence equipment, etc., and more besides.

Then, it set the pace for innovative technology as related to steel and allied products.

From ERW pipe plant Rourkela graduated to India's first Large Diameter Spiral Weld Pipe Plant.

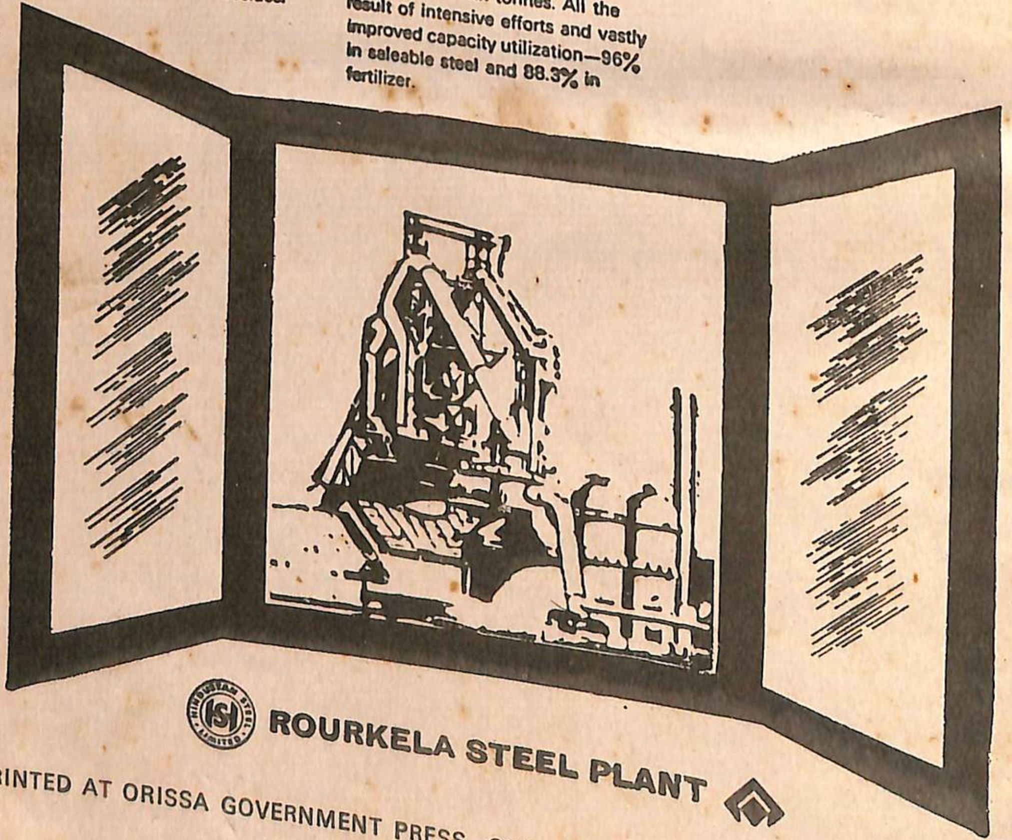
Besides, Rourkela also produces two types of chemical fertilizers-Calcium Ammonium Nitrate (SONA) and Ammonium Sulphate (RAJA).

Production and productivity at Rourkela achieved new peaks of performance. For example production of saleable steel rose from 8.12 to 11.74 lakh tonnes. Fertilizer from 2.45 to 3.18 lakh tonnes. All the result of intensive efforts and vastly improved capacity utilization—96% in saleable steel and 88.3% in fertilizer.

A glimpse into Rourkela today will reveal much more than this. It will reveal the concerted effort of 37,000 people, sophisticated equipment, advanced know-how and research and development.

It will reveal an acute sense of responsibility towards industry and the nation as well.

In short Rourkela presents a view of tomorrow, today.



ROURKELA STEEL PLANT

PRINTED AT ORISSA GOVERNMENT PRESS, CUTTACK-10